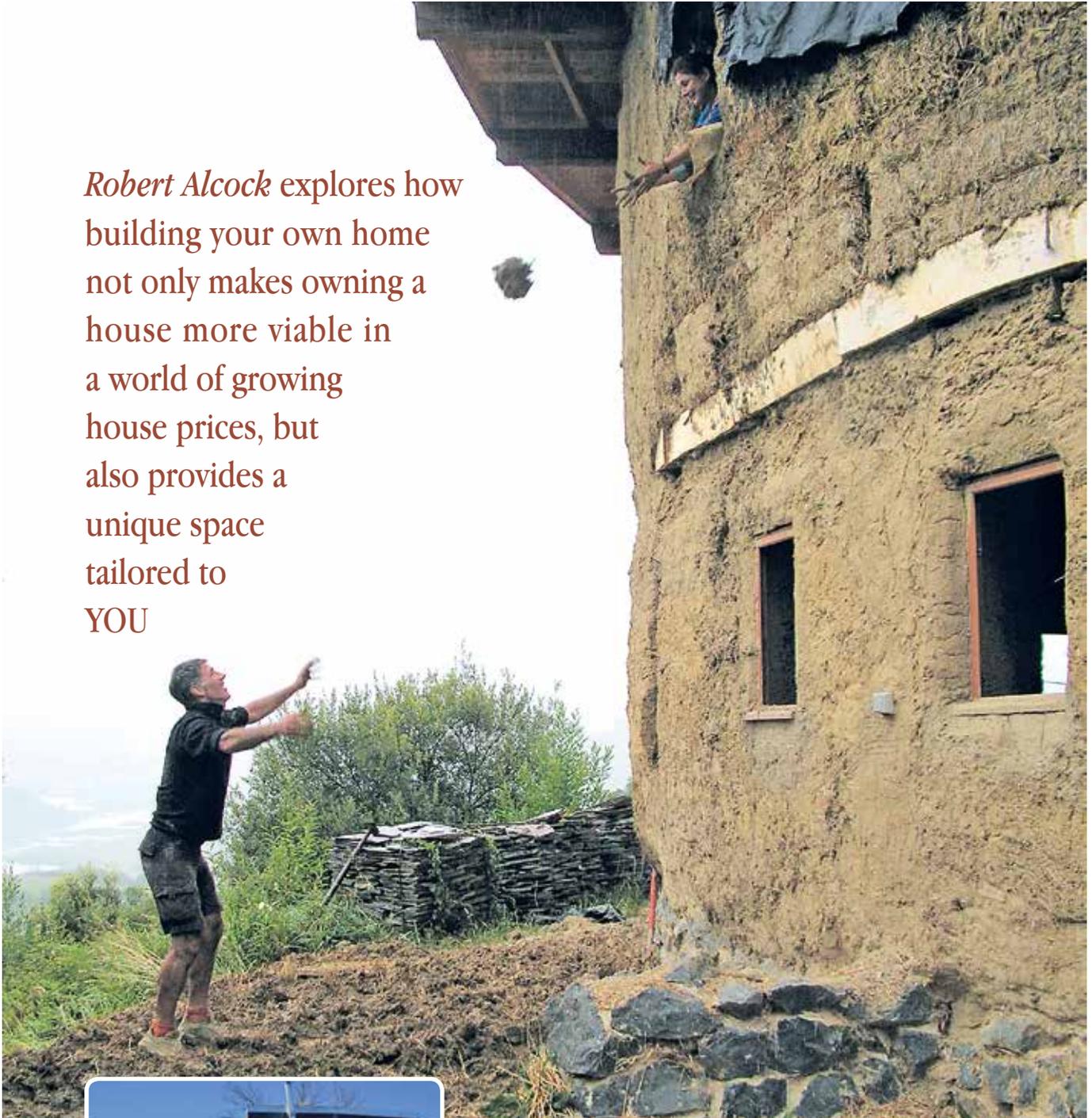


HOW TO BUILD Your Dream House

Robert Alcock explores how building your own home not only makes owning a house more viable in a world of growing house prices, but also provides a unique space tailored to YOU



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WITHOUT A
MORTGAGE!



People are always talking about house prices, and no wonder. The cost of shelter, compared with wages, has been rising for generations; for many, decent housing has become a luxury. For example, in Britain today, the average cost of a home is equivalent to eleven years' net income¹ for a typical family – without counting interest payments or living expenses. In ecological terms, the global construction industry is responsible for a huge slice of resource use, pollution and habitat destruction. The buildings it churns out are often ugly, soulless, unhealthy, and inefficient. But what really seems to obsess people is how much they cost.

The cost of housing was already a big issue in 1845, when Thoreau noted that the average labourer in Concord, Massachusetts, earned \$1 a day, while a typical house cost \$800, i.e. two and a half years' wages. He wrote, "Would the savage have been wise to exchange his wigwam for a palace on these terms?" Today, after 170 years of material progress, in real terms our houses cost over four times as much!



Previous page: Throwing up balls of cobb (inset: Main house). Above: The Snail Cabin allowed testing of techniques later used on the main house. Above right: The completed self-built, dream home. Below: Part of the family-sized kitchen. Bottom right: Cob construction, big and small.



BUILDING FOR YOURSELF

Thoreau's practical answer was to build his own cabin in the woods, for \$28. He blazed a trail for those seeking independence and the simple life. Yet self-build has usually been considered a fringe activity, not a serious response to the housing crisis. To judge by the success of TV programmes like *Grand Designs* or *The House That £100k Built*, many people today still dream of building their own home; but those dreams are often doomed to frustration. The construction industry is geared up for mass production; anyone who tries to build a tailor-made home is swimming against the tide. Recently a friend told me about the extra hassle and expense he had gone through, just to put a 100mm (4in) wall cavity in his extension instead of the standard 75mm (3in). So much for changing the system gradually from within!

If you want decent housing without mortgaging your life away, you may need to consider radical alternatives. For the past eight years, while freelancing as a translator and ecology lecturer, I've been building a house – out of mud.

Well, two houses, actually: a 40m² (430ft²) cabin as temporary accommodation, followed by a two-storey, 220m² (2,368ft²) main house, where my partner Almudena and I now live with our two daughters. Almudena, who also works full-time, has been mostly responsible for organisation, while



I've been in charge of design and execution. We've built mainly by hand, using local, natural, and recycled materials. Our cob walls are a mixture of clay from the site, sand, water and straw, and the help of over 200 people, including friends, family, and volunteers from all over the world.

Building a house is a gigantic amount of work, no matter how you do it; but self-build is not like most jobs. It demands creativity and problem-solving; you're working at your own pace, in the open air, getting healthy exercise; you



don't report to anyone, so you only have yourself to blame for your mistakes.

Conventional building, above all, is about making a profit. Self-build, by contrast, is the art of building as a harmonious part of the art of living. It's about building *yourself* – not in the Schwarzenegger sense (though you may end up with some bulging muscles) but becoming a wiser, more resilient and more capable person – as well as a better housed one, of course.

In the end, we've got a unique house, tailored to us, and one we could barely have afforded by conventional means. The total cost – including land, plans, permits, materials, paid labour (plumber, electrician, etc.), and food for the volunteers – has come to around £130,000 (€155,000 or \$215,000). That's just one-third of the average, per square metre, for a house in our region (Cantabria, northern Spain).² Apart from the land, which we bought with an inheritance, we've paid for everything as we went along, with no mortgage.

I don't want to paint too rosy a picture – we've been through a lot of stress and discomfort, and some very dark times – yet on balance, it has been one of the most rewarding experiences of my life. But even if we consider the work as if it were conventional employment, and include my loss of potential earnings in the equation, we still end up way ahead of the game.



LAND & FREEDOM TO BUILD

So, say you've decided to take a radical approach to housing yourself. What next? Well, don't start by giving up your day job. Even a self-built eco-house does cost *some* money. You'll also need access to land, though not necessarily your own. Thoreau built his cabin on land belonging to his patron Emerson, and no more than about half the self-builders that I know of, actually own the land they have built on. Be patient, and practise on small projects, while looking for the right place: it took us four years to find ours. At the time we were working on a Transition-style initiative in Bilbao.³ The most fulfilling part of that project, for me, was building a riverside container garden⁴ – still in use after 10 years.

There is also the question of legal permission. Laws governing what you can build, and where, vary tremendously from place to place – as does enforcement of those laws. We took the legal route of submitting plans and paying a fee, but I know of quite a few people who have built (small) houses without seeking permission, either using loopholes or else under the radar. Above and beyond the question of what is permitted (or what you can get away with), is a moral issue. Should shelter be exploited for profit or should it be a human right, within ecological limits?⁵ Do you need anyone's permission to live?

NATURAL DESIGN FOR NATURAL BUILDING

After finding your site, the next step is design. In self-build, it pays to take a flexible approach, making many decisions on the spot, instead of sticking rigidly to plans. Self-build, almost by definition, involves learning as you go along; our entire build was designed as an educational project. Sometimes things turn up out of the blue. For us it was 16 gigantic reclaimed beams which we got for a song, just as we were planning the foundations; we ended up redesigning the house around them.

But you will need to work within a general framework of what to build, where, with what and how big. It makes sense to start small and grow, whereas starting too big is a recipe for disaster. Our guest cabin started off tiny (just 15m²/161ft² with a sleeping loft); we expanded it when we realised it was really *too* small for the four of us, even temporarily. On the other hand our main house was really too big for a self-build project. I often felt like I'd spawned a cob monster that was devouring my life. Now, of course, we're glad of the extra space!

House design is an ancient practice; you can learn a lot from tradition without copying it slavishly. New 'alternative' ideas like geodesic domes or earthships often sound wonderful but have hidden flaws. Straw bales are one new-ish technique (dating back a century) that shows much promise, but requires extra care in damp climates. We included straw bales as insulation in the wall of our main house, but we ended up having to tear out the whole first storey and rebuild in cob because the bales got wet (mind you, we were foolish enough to start building with bales in autumn.) On the other hand, there are thousands of medieval cob houses still in use in Devon and Cornwall, climates just as wet as ours, so we felt pretty secure in our decision to use cob.

In temperate latitudes, a passive solar building – well insulated, elongated east-west with plenty of south-facing windows, thermal mass, and possibly unheated buffer spaces

to the north – can save you the cost of an elaborate heating system. Our house is heated with just a wood stove (the firewood comes from our own land), while our hot water comes from solar thermal panels and a back boiler, so our heating bills come to a nice round figure: zero.

Choosing your building materials is a key decision. Self-build naturally goes along with using free or cheap, local, natural and/or recycled materials. They require a bit more work, but the end result is unique, and if (when) you make mistakes, they will mostly just cost you time rather than money. Natural materials like earth and wood have a totally different feel and dynamic from metal, bricks or concrete. It's easier to find people to help you build, if the main activity is throwing balls of mud.

On the other hand, being an eco-builder doesn't necessarily mean you have to be a purist. In our foundations we used a fair amount of concrete, and polystyrene insulation instead of natural cork (which is twice as expensive). You can't be perfect in an imperfect world; sometimes you may have to choose between being 'eco' and being practical.

SCALING IT UP

There are plenty of examples to prove that self-build with natural materials is viable. But how to scale it up? Building your own house means climbing a steep learning curve. At the moment I'm helping a friend and neighbour who has started building his own cob cottage. We also have plans to build two more houses in the small village where we live, and we're looking for people, preferably families, to invest and get involved in that project.

It's never a mistake to follow your dreams provided you haven't bought into someone else's by accident. As Thoreau put it: "If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them." 

Robert Alcock is an ecological designer living in northern Spain. When not playing with mud, he teaches Masters students about the links between health, ecology and sustainability. He is currently working on a book about the experience of self-build with cob. www.abrazohouse.org

FURTHER READING

The Hand-Sculpted House – A Philosophical and Practical Guide to Building a Cob Cottage, Evans et al. *Building With Cobb – A Step by Step Guide*, Adam Weismann, Katy Bryce. *The Cobb Builders Handbook – You Can Hand-Sculpt Your Own Home*, Becky Bee. See www.green-shopping.co.uk

¹ Average UK house price 2013: £242,415. Median UK household income after taxes: £22,204. Sources: House prices: http://tiny.cc/bbc_house_prices. Income: http://tiny.cc/uk_income

² €596/m² compared with €1,785/m², the average house price in Cantabria, December 2013. Source: <http://tiny.cc/tasacion>

³ See PM45, 'Creating an Eco-Community in a Post-Industrial Wasteland', 'The Island the Never Was' www.abrazohouse.org and 'Beyond Z' in Dark Mountain issue 3 <http://dark-mountain.net>

⁴ See PM53, 'Gardening from Zero'

⁵ This right is arguably upheld in the constitutions of some countries, for example, Ireland. See the recent case of Katie Fortune, described in *The Land* 15 (Winter 2013-14) www.thelandmagazine.org.uk