

Earth and Chemical Free Timber: Sustainable Building Materials

By Mark Fielding

I believe the 'most' sustainable building material in New Zealand to be non-cement earth blocks known as Adobe or Mud Brick. I'm sure we will see a massive growth in the use of this natural material which has virtually no environmental 'down side'.

In Nelson our best 'earth' is the clay rich subsoil found in abundance in the Moutere hills. While it is certainly possible to make one's own blocks according to the NZ Earth Building Standards, it may be a wiser choice to let the experts at 'Solid Earth Ltd.' make and even lay your earth blocks. Many different finishes are available, from the natural look through to contemporary smooth plastered surfaces which disguise but don't diminish the beneficial nature of the underlying material.

For me an earth house feels better to be in than any other type of house. It has a comfort which is hard to describe – quiet, calm, not too hot or cold, just right. However such high mass buildings can be very *uncomfortable* unless designed by experts in Passive Solar Design, as high levels of solar gain are crucial.

Earth houses also have other beneficial qualities. They moderate humidity levels, eliminating condensation, and they neutralise airborne toxins, which makes them natural air conditioners!

Massive earth is not always practicable, especially on the steep slopes of some Nelson suburbs. Timber frame homes are then the obvious choice but even here some thinner 'veneer' earth walls can be incorporated as feature walls, providing some of the benefits of earth.

Since the 2004 Building Act it has been more difficult to build with chemical-free naturally durable timber. However the Building Code 'Acceptable Solutions' are not the only way to achieve a building consent and I am currently working on projects which offer 'alternative solutions' specifically in the selection of timber for wall, floor and roof framing.

Local company Gibson Timber Ltd. are actively promoting the use of naturally durable timber such as Macrocarpa, Lawson Cypress and NZ grown Redwood. Untreated Douglas Fir, once a mainstay for frames and trusses, is also a time-proven material in thousands of existing NZ homes. Given this 'evidence of performance', soon this superb timber may once again be a choice alongside treated Radiata Pine.

There are many other considerations when building a sustainable house. Once you start looking for ways to avoid unsustainable methods, it does become easier and then as Councils accept alternative solutions, the way is opened for others to follow.

I care passionately about healthy living and conserving our environment. I can 'do my bit' by actively promoting the principles and benefits of 'sustainable' residential design. You can find out more by visiting:

www.greenhouse.gov.au/yourhome
www.level.org.nz and
www.ecoprojects.co.nz