



# A faster, smarter build

// words anthony pillinger

I've always loved building but have always considered it medieval in selection of material.

Why are we still building with mud bricks and coating them with an earthen daub? Why is a pure masonry building still favoured by so many?

With the advent of more lightweight options available to today's builders and designers, earthen building products should be put in their place - as heat sinks and as feature walls/floors that assist in regulating the ambient temperature without the input of power.

The place for a lightweight wall that can achieve over R4.0 is on the sunny perimeter. It is as simple as that.

I am a builder and quantity surveyor and over the years have done the number crunching on many methods of composite construction. Sadly, the reverse brick veneer tops the list in affordable composite solutions - but not by much.

Why do they do it the wrong way around over east but next to never here? I think the answer is demand, and market awareness. We are fortunate enough to be building in a period of strong marketing and increasing public awareness of the merits of lightweight construction, coupled with many innovations. It is for us to change with the times, and embrace a greener and smarter approach to construction.

Using a prefabricated timber structure substantially reduces construction times and directly helps drop the cost of time-based incidentals such as scaffold. There are also other hidden benefits such as a decreased pressure on Building Indemnity Insurance limits as a result of



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dropped metal grid ceiling frames.

What about mass? Timber does not conduct heat as well as a slab, however if the floor were to be a lightweight aerated concrete product with a tile finish, the mass issue is remedied.

These products all are readily available in Perth; a builder/designer just needs to think outside the box and get to know them.

Finally, slabs will be rescheduled if there is a whiff of rain. The timber-framed floor, with or without the aerated concrete, will be installed in a fraction of the time it takes to prepare and pour a suspended slab.

About 90 percent of our jobs are substantially lightweight these days. Our single-storey houses commonly have a polished concrete slab, and a feature face brick wall to the southern internal face. The rest is well-insulated timber framing.

In two-storey scenarios, many have a lower storey of 100 percent brick and an upper of 100 percent timber. By cladding the lower wall instead of rendering we can mimic the benefit of an external timber frame.

There are many more ways to keep a house cool than there are to skin a cat. Start with timber, and think where it can be best used, don't leave it as just an option for holding up the roof sheeting. Be active in promoting timber in your designs. It has helped Swell Homes, being so closely aligned with Shoreline Designs, develop into a better building company.

As a community, we need to embrace the better option. This needs to be across the board, and marketed correctly so that all are aware of the benefits of a composite home. **BC**

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## MiTek PosiStruts have an easy access advantage.



creating the **advantage**

MiTek PosiStruts are ideal for today's building needs because they offer a wide range of advantages, which deliver savings to the architect, engineer and builder. They're a truly customised, totally engineered flooring and / or roofing system that combines the versatility of timber with the strength of steel.

PosiStruts unique 'open web' design provides excellent access for services, whilst making them lighter and quicker to install than solid timber joists. Plumbing, electrical, heating & air conditioning/ducting can all be easily accommodated by this ingenious 'open web' system. Forget cutting through solid timber joists and reducing their strength; PosiStruts make difficult access a thing of the past.

No other Beam can boast 'Top Chord Support'... so there is no need to use expensive fixings and brackets during installation.

PosiStruts can be manufactured in lengths up to 12 metres, with either 35mm or 45mm chords, depending on load bearing requirements. They can span large, open areas with minimum use of internal supports, making them the ideal solution for open plan designs. They can also be specifically designed and engineered for special projects and tailor made to accommodate special support conditions like hidden steel beams.

There have even been some innovative applications in roof construction, with everything from standard roof-lines to curved structures.

Although popular in domestic construction, PosiStruts are now making a name for themselves in a vast array of commercial and light industrial applications because they offer a far more cost-effective solution to steel and are much easier to install. They're also ideal for second storeys, sites with poor foundations and steep sites which need to be cut & filled, thus avoiding costly retaining wall structures.

In fact when you take into account the ease of installation and the easy access advantages for services, the savings on-site, in man-hours alone, can be considerable.



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