



# Knock on wood

// words norman burns

Timber frame homes are growing in popularity in WA partly because of their energy efficiency and cost.

The Kiwis love doing it. As do Europeans, Americans and east coast Australians.

The "it" is building a timber-framed home. A technique that is becoming more popular in Western Australia thanks to the efforts of specialist builder, Total Home Frames Pty Ltd.

Total Home Frames proprietor, Chris Zencich, has seen demand for treated-pine construction climb steadily since the company began 15 years ago.

"Initially, we specialised in pole homes and we developed ideas with the way we wanted to build and design them," says Mr Zencich. "One of the things we do, because of floor-truss technology and spans, means the client can enclose the bottom area of the home.

"People use this space for workshops, car storage or parking. We have even built homes in 100-year-flood areas where you need to get the finished floor areas above the 100-year flood level."

He says a timber-framed home has many benefits over the traditional home and the strength in a framed home is its flexibility.

Statistics show that in the Meckering earthquake (of 1968) nearly 100 per cent of the concrete buildings collapsed and nearly 100 per cent of the framed homes were left standing.

"There's a bit of a myth out there with people thinking concrete is strong but once a crack forms in a concrete wall and it loses its structural strength, then in some cases you have to knock it over and start again. That's why most of the world - New Zealand, America, a lot of Europe and the east coast of Australia are using framed construction."

But using timber isn't the only ace Total Home Frames, which builds in the metro area, Geraldton to Kalgoorlie and down to Esperance, has up its sleeve.

Combining a timber frame with stump construction not only proves more cost-effective but can considerably increase the energy efficiency of the home.

"There's a lot of benefits to building on stumps," says Mr Zencich. "You eliminate costly site works. With different ground conditions like clay or seismic, those sort of things, the pole home eliminates a lot of the problems that slabs have with the site works." ►

THE TEAM







Stump construction once meant you needed multiple rows of stumps (the old stump and timber bearer system) to provide support for a structure, but not any more.

Total Home Frames uses a patented method in its stump homes, a building method similar to that used in bridge construction, long-reach floor trusses. The result is fewer stumps, opening up the under-house space to the homeowner yet providing a fully-engineered floor.

"The pole goes into the ground between 600 and 900mm, depending on where the pole is in the structure. The pole is encased in concrete and we use H5 in-ground stumps which are termite-proof.

"We could theoretically build these homes in a river as the material we are using for the stumps is durable for full, fresh-water immersion 24x7," says Mr Zenich.

"We use treated materials right through to the roof truss so the client never has to worry about pests or spraying. We do ask them to check the building once a year but they don't have to worry about the materials because the structure is safe within itself.

"Most builders don't use treated materials within the building but we do and have done so for 15 years."

The use of floor and roof trusses in the designs means larger spans between the stumps.

"It's a similar method to that used in bridge building. In the older, timber-bearer system, you would have three times as many stumps. Most of our designs have a minimal number of stumps because of the truss so the client can utilise the space under the house," he says.

"With a stumped-floor system, the home is a more complete product, whereas the site-works cost for a slab can blow out to anything for retaining walls, engineering, preparation for the compaction and sandfill, cutting, sub-soil drainage, etc; and that's why people can get astronomical site works costs.

"Whereas with stumps, we can come in and build and as long as the site's clear, we can build to the contours of the site

and hardly touch the site. That's the beauty of it."

With people now much more aware of the energy efficiency and green value of a home, the timber-framed home leaves a much lighter environmental footprint.

"Timber-framed construction uses renewable pine and the materials used to build the home generate the least amount of greenhouse gases into the atmosphere," says Mr Zenich.

Research by James Hardie shows a timber frame wall system has the lowest embodied energy when compared to all other construction methods.

The fact that timber is a renewable resource gives it an advantage and there is no heat conduction through walls which is especially useful during WA's blazing summer months.

"Timber frame construction allows us to fully fill cavities in the floor, roof and wall with insulation."

Mr Zenich says Total Home Frames' dwellings, depending on the climatic zone they're built in, can produce up to an 8.7-Star energy efficiency rating, exceeding the BCA 2009, mandated minimum 5-Star rating currently required.

With dozens of designs, ranging from the Getaway Range (which are also offered in kitset form), the Total Home Frames range and the soon-to-be-launched City Series, there are timber-framed homes to suit all clients and budgets.

Basic designs in the Getaway Range start at under \$60,000 while those in the Total Home Frames series go from \$100,000 to \$320,000.

"There are still some big homes in the Getaway Range but they are built to a lower specification inside with no built-in robes and no porticos. There's still tiling and glass enclosures to the showers and general features, but they are built a bit more to a project-build type budget," says Chris.

But buyers don't have to stick rigidly to what the company offers, as a new home recently completed in Darlington proves.

The 312 square metre three-bedroom home, costing around \$300,000, is based on Total Home Frames' Ridgeview



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design, aimed at maximising views with all the living areas upstairs, but has been heavily customised by the clients.

"They've taken the shape of the Ridgeview but that's about it. The kitchen was moved. They've added bigger verandas and the front elevation is quite a bit different – a weatherboard, front gable instead of an open gable and they've extended the front veranda where a lot of socialising is going to be done."

The home uses a StructaFloor-engineered floor system.

"It locks together with a tongue and groove system. It's stronger than natural timber and is widely used in the eastern states," says Mr Zenich.

"You can tile on that and put a membrane down over it for the wet areas. We've used it for 10 years and it's a proven product."

While the homestead style of the Darlington home fits like a glove into its rural setting, the company has embarked on a much more contemporary feel with its new City Series, including two-storey houses to fit 12 to 15m-wide blocks.

"There are 14 new plans designed, using the James Hardie, Scyon products. The construction is still treated pine but the designs are much more futuristic. Flat skillion roofs, gabled windows and using more of the masonry-type-look claddings from James Hardie's Scyon range," says Mr Zenich.

"We've got the economics of stumping right down. Everyone in this company is geared up to build stumped homes very economically and our skilled carpenters and everyone within the company are specialised to achieve this. And that's why we're building so many of them."

The company has generated a lot of referral business with some clients returning more than once.

"We've been going 15 years now and our name is very strong out there." **BC**

**Total Home Frames: 1300 812 128, [www.totalhomeframes.com.au](http://www.totalhomeframes.com.au)**