

on the house

Prefabricated buildings have the potential to solve all manner of construction problems, say the people behind PrefabNZ.

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Ask Chris Moller about the potential for prefabrication to change the way we build our houses and he cites a cartoon. Drawn by the American neo-futurist architect Buckminster Fuller in the 1950s, it depicts a car being constructed on a suburban front lawn. "Of course, no one would contemplate making a car like that, yet that's how we do buildings – not just houses, everything."

The Wellington-based architect and deputy chair of PrefabNZ will get a chance to air his enthusiasms when he hosts *Grand Designs New Zealand* later this year. In the same way that Kevin McCloud's love of

heritage shines through in the English version, Moller's passion for prefab will surely make an appearance.

"I've spent 25-30 years producing buildings, and most of them have used prefabrication technologies in some form or other," says Moller, whose CV includes affordable social housing projects in Europe where prefab featured particularly strongly. "You can assume that it's baggage I'll bring with me."

Consider it another step in the rehabilitation of prefabrication's public image. Historically associated with flimsy classroom blocks and tacky-tacky housing, prefab is increasingly being touted as an answer to all

manner of ills, from the Auckland housing shortage and the leaky homes debacle, to the Christchurch rebuild and the unaffordability of quality design.

Pamela Bell is the founding CEO of PrefabNZ. A former New Zealand snowboarding Olympian and a qualified architect, Bell identified the need for an industry body while completing a Masters thesis looking at the reasons architectural prefabrication had never taken off in New Zealand. Concluding that a lack of collaboration between manufacturers, architects and builders had hobbled its uptake, she decided to do something about it, forming PrefabNZ



This page: Prefabricated houses mean architecturally designed homes are getting to families that couldn't normally afford them.



in 2010.

The building industry is slow to change, but Bell senses the tide turning. In Christchurch, for example, work has begun on a New Zealand-first panellised building factory. A joint venture between Mike Greer Homes and Spanbild, the 5000-square-metre factory will manufacture precast walls, floors and roof panels, with the capacity to turn out 1000 buildings yearly.

"The consumer won't know any different from a traditional frame-and-truss built home," says Bell,

noting that prefabrication runs the gamut from fully formed houses to standard pre-nailed roof trusses. "This is about the back-end, about the delivery of a house being a more streamlined, efficient and faster process, and using resources in a better way."

If there's a hint of evangelism there, it's understandable. "The industry is not geared up to respond to the leaky buildings issue, the Canterbury earthquake and the Auckland housing shortage," she says. "We simply can't deliver the housing needed at one house per year per builder."

From a personal viewpoint, Bell is attracted to the potential for prefabrication to give architecturally designed homes to the average punter. The likes of André Hodgskin's sleek "Bachkit", or Hodgskin's recent "Park Terrace" collaboration with Keith Hay Homes, are the prefab movement's poster boys.

Ultimately, however, it is the less sexy efficiency arguments that may win the day. "Increasing productivity is a major focus for the construction industry," she notes. "And from the consumer perspective, by taking building offsite you get more of a known quantity: a known time frame, known costs,


known sustainability and known design."

Will prefabrication – or off-site manufacturing, to use its other label – make housing more affordable? If using more prefabricated parts can speed up the building process then money will be saved, answers Bell. However, "the number one advantage to using more prebuilt parts is about controlling quality, because you can do that better indoors than on site."

Other selling points include the reduction of disruption, mess and noise associated with conventional building. With Christchurch under construction for the foreseeable future, it would surely appeal to people living in that city. Bell predicts that prefab will also feature in the remediation of leaky buildings for the same reason. Other potential growth areas are in social housing and the retirement village industry, where there is potential for savings by using prefabricated bathroom pods and the like.

Persuading the industry of the merits of prefab, however, is likely to be a tall order. Major players such as Fletchers will take some convincing of the need for change. Equally challenging is the ongoing New Zealand love affair with big, bespoke houses.

Isn't prefab a recipe for delivering cookie-cutter, one-size-fits-all housing? Maybe that applied in the 1950s, answers Bell. "But with the advent of computers it's now all about mass customisation, about delivering efficiency and celebrating the individual. When you look at successful prefabrication industries offshore like Japan and Germany, where 15 percent of all homes are built using panels or modules, every house is different."

Moller agrees, adding that prefabrication shouldn't rule out a building responding to the particular requirements of its site and user. "Not at all – although a lot of my colleagues may not agree with me." He now has an opportunity to change their minds. 

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