

Precast concrete is established in commercial buildings, but now all of its benefits can be applied to residential construction thanks to a building system set to tip the industry on its head.

# a concrete solution

Story: Laura Valic

Our houses don't settle, they float; you don't even get a cracked cornice.' These are the words from builder Mick Johnson, who has developed a system that's designed to erect durable homes at a record-breaking pace. REZICAST Systems, as it is known, is an adaptation of commercial precast panelling to suit the residential market and is now available to other builders.

The innovative solution offers plenty of advantages for new builds – not the least being lock up in just 10 days and handover to homeowners at 10 weeks or less.

'I built my first residential precast home in Bungendore, NSW in 2012, which we completed in eight weeks,' he says. 'We've since completed four-bedroom homes in only six weeks. Since that first home I've tweaked the process to make the building system more affordable.'

An experienced HIA member builder in the Canberra region and surrounds, Mick says he was looking for an alternative building method for constructing brick homes because he was struggling to find bricklayers, and at times, brick supplies for his custom-built projects. REZICAST Systems he says is years in the making toward finding a more effective way of building homes.

'People have tried precast in residential building before, including tilt-ups where you make the panels onsite and tilt them up,' Mick explains. 'It was expensive and slow, and condensation was a big issue, but we've resolved this with REZICAST Systems. Our system also differs from tilt-ups in that we truck the panels onsite and crane them into place.'

Day one of this building method involves putting up the walls and trusses to form a cold shell. On the second day drainage works and an internal inspection is completed, while the following two days are typically reserved for slab preparation and pour.

'We pour our slabs through the trusses with the booms so concreters don't need formwork because the walls are up – meaning there's no mess and no materials waste onsite,' Mick says. 'They love it; they're in and out. Normally, concreters would take two days prepping a site, but it only takes them half a day with us and half a day to pour the slab, so they're off doing another job straight after.'

Day five, six and seven will see the frames walked in and the roof put on. 'Then day eight is usually for installation of windows, which we place into pre-cut holes,' he says. 'That's our point of difference to other builds, but once that part is complete you achieve lock up.'

'For builders, that's a great advantage because that's half your money in 10 days, so using REZICAST Systems is cash flow positive.'

For the following weeks the process reverts back to a standard >

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build where other trades move in to finish tasks from wiring, plastering and painting to tiling and insulation. Architect Hugh Gordon says the system is 'incredibly flexible for one-off designs'; the concrete walls can be painted or polished, stone can be added or you can incorporate glass or timber.

However, Mick adds all selections need to be made by clients before starting onsite because the fast build process means there isn't much room for variations along the way. And while there's also no room for getting window measurements incorrect either, he says the team can assist in a couple of ways to ensure accuracy.

'We can arrange for the panel drawings with the window gap in them and just take 5mm off the panel; the windows go straight in with no issue,' he says. 'Or builders can send us their window sizes, so the holes in the panel then match up with the windows. Every wall is engineered in a REZICAST Systems home, so this is all a standard part of the approvals process before the drawings go off to the precaster to be made.'

Mick says he has stayed in touch with former clients and they have reported back that their homes perform well with low energy bills as a result. Along with energy efficiency and good acoustics, they've also reported no settlement over time.

'You won't get any cracks because you don't have footings that move. A lot of house defects from cracking due to ground movement. These panels don't move because they end up at 70 MPa, so they're strong structural panels.'

He adds that the system is also simple for builders to use. 'You just need a spirit level that works. If you mark out and put up the frames properly, you're done. Plus we can offer technical support when required.'

One of the biggest questions builders ask is, how much? Mick says REZICAST Systems is an alternative to rendered brick veneer so the aim is to keep the panels at the same price per square metre. 'We have the panels capped with precast suppliers to make it more affordable and can also point builders to the best located manufacturer for their projects.'

Since REZICAST Systems can be used in any climate zone, including cyclone and bushfire prone

areas (the system has a cyclone tie down option and a BAL29 rating), there has been increasing interest from domestic and international companies. But Mick emphasises that REZICAST Systems is not a franchise but an engineered solution to achieve rapid lock up and construction. 'It solves so many problems in the whole industry right now. You do one and I guarantee you'll like it.'

REZICAST Systems is now available to other builders as a pay per build license. Following the 2019–2020 bushfire season some of the first reconstructed homes will be made with REZICAST Systems and Mick is offering a discount to builders engaged in the recovery efforts (see text box). He says he would like to see affected homes built by local builders so the economy in those areas can begin to rebuild itself as well.

[www.rezicast.com](http://www.rezicast.com) 

Mick Johnson,  
director of  
REZICAST Systems



## Bushfire rebuild support

Mick Johnson, director of REZICAST Systems, was trapped like so many other holiday makers by the bushfires that devastated the NSW South Coast over the Christmas break. He says on another occasion while he was driving to a HIA meeting (ironically about the impact of the fires which had to be cancelled) he was lucky to get past the flames.

As a builder he has considered what it will take to overcome the challenges of rebuilding lost homes and businesses following one of the worst fire seasons Australia has ever seen, and says he may just have the answer. 'After seeing what I saw after New Year's Eve it's going to be a massive effort to rebuild, but I believe this could do it.'

Mick is talking about REZICAST Systems, a building system that uses engineered concrete panels for rapid construction, durability, good energy performance and bushfire resistance – a quality that will be particularly relevant for rebuilding communities. REZICAST Systems has a BAL29 rating, but Mick says with minimal additional costs a BAL40 rating is easily achieved.

'I truly believe that REZICAST Systems is the solution right now, ready to go tomorrow that's bushfire resistant and ticks all the boxes,' he says.

For any licensed builder engaged to rebuild a bushfire razed home anywhere in Australia, REZICAST Systems is offering a discounted fee on its use. 'REZICAST Systems is an opportunity for like-minded builders to utilise the system to help rebuild homes destroyed by the recent bushfires,' Mick says. 'Builders are going to be busy, so how about you come to us and build a heap more, and we'll help you out.'

To get in touch call 1800 739 422, email [hello@rezicast.com](mailto:hello@rezicast.com) or visit [www.rezicast.com](http://www.rezicast.com) for more information.