

AT HOME

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SPOTLIGHT
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Ice, ice baby



The benefits of taking a brisk plunge

&

Michelle Payne



Hard graft delivers cosy rural rewards

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Rivers of risk

Life on the flood plain

Hard lessons from repeat losses are reshaping flood-prone communities

Words: Rob Pegley, Darren Cartwright and Kate McIntyre



The Hawkesbury at the height of one of three floods to hit Florencia Melga's home (indicated by yellow arrow).

When Florencia Melga moved into her riverside home three years ago, it took just three months before the first flood hit. Within 30 months of living there, she had dealt with three major flooding events – and her house had doubled in value.

She is part of the new wave of people facing up to nature with some clever floodproofing tactics.

"When I first moved here, people said to me: 'What on earth are you doing?'," she says. "People would think: 'Surely, this would make you want to leave?' But it's the other way around and I feel even more committed to the place."

BRINGING THE RIVER IN

After moving into the Wisemans Ferry house, northwest of Sydney, in 2020, Melga made a number of value-adding changes to open up the view to the nearby Hawkesbury.

She moved windows, painted the floor and added a balcony. She also added some off-grid touches such as solar power, satellite internet and rainwater tanks.

But perhaps the best changes she made during her short time in the home were the ones that helped the community stay safe.

"When I moved in, the 100-year flood line was far from the house, but three times now the water has passed that line," she says.

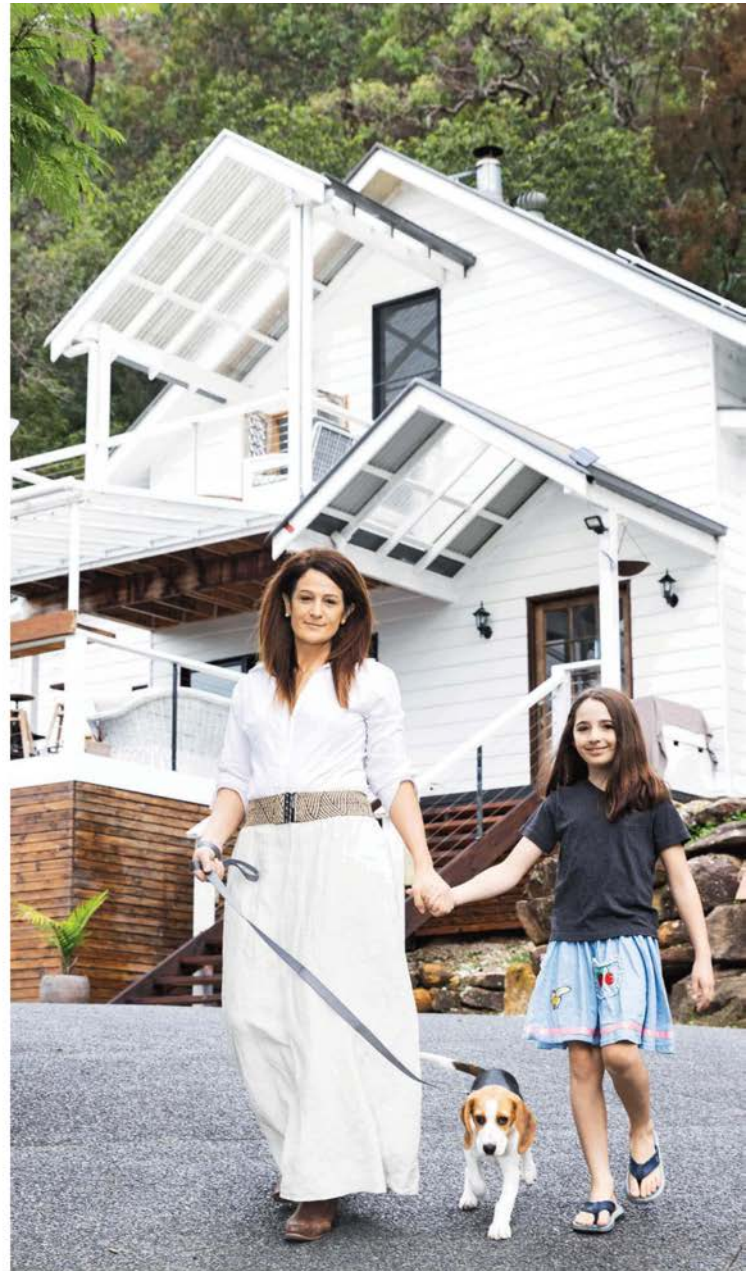
"I've made changes to the property, though. A handyman created a concrete drain that I designed to help water flow away better.

"There are pipes now to the road. Different stairs have been put in. I've got my own generator and fuel reserves."

Not only have these modifications helped her family and prevented loss of property value, they have also helped her neighbours.

"I had nine kids over with my children during the last flood," Melga says.

"The water levels felt safe and we had a stove working in the open lounge room so



that it felt like camping. Kids were coming over to charge batteries.

"My kids said it was the best school holidays they'd had in their lives."

'BIG BATHROOM' HOMES

Rather than move to a different area, Melga believes the riverside community can adjust to the changing weather patterns at hand. She is not alone.

For more than a decade, architect James Davidson has been championing the need to retrofit homes and build them like "big bathrooms" to be flood resilient in some of Brisbane's most water prone suburbs.

In recent Queensland flooding events, his climate-responsive designs were thoroughly put to the test.

A Graceville home that was constructed shortly after the original 1950s property was wiped out by 2011 Brisbane floods, was built with concrete floors, removable cabinets made of marine ply and sunken door sills. There is also hardwood joinery and rendered block walls. The theory is that these features allow for the interior to be thoroughly washed with a high-pressure hose if the home becomes flooded.

"The house is designed like a big bathroom where we use tiles, waterproofing



Dr James Davidson is a big proponent of floodproof design, as seen in the now proven Graceville project, above.

and cabinetry that has been designed as if it was on a boat," Davidson says.

"Waterproof concrete flooring, resilient rendered block walls and recessed doors and windowsills all make it much easier to push water out after flooding."

The design proved successful. Owners Tfer Newsome and Michael Mader say they were back living in the home within two weeks of the water subsiding.

This was a remarkable result compared to the 18 months it took following the destruction of their previous house.

"Given that we had a metre of water in the house and it just lapped the top of the

kitchen benches, it's about as good as we could have expected," Newsome says.

"We used a Gerni, swept, used disinfectant and scrubbed with sugar soap and have done that over and again. It was very much rinse and repeat."

"This amount of discomfort is infinitely preferable to the destruction and rebuild."

HIGH HOMES

Davidson says building homes higher to withstand rising flood waters is only one part of the equation.

"Flood resilience is not just elevating homes, because you can never predict the

level and within a year of building this house the council put the levels up another metre and a half. It's why their neighbours' house is significantly higher," he says.

"Flood resilience overall is a complementary approach to mitigation because next time around the flood may be higher, as it was in some suburbs."

Award-winning architect Joe Adsett says Davidson has become a trailblazer in the field of floodproof design.

"He is a pioneer in that space and we (architects) often look at his research when designing homes," he says.

"He's the leader of the pack."



TOP TIPS

for building in a flood prone area

1 Research flood levels and engage a surveyor for a flood level survey. These are mandatory in flood-prone areas.

2 Raise the power points and meter box so they sit above the flood line.

3 Install removable cabinets so they can be cleaned behind when floodwaters recede and/or easily moved upstairs.

4 Avoid using plasterboard or carpet in flood-prone rooms as both are easily destroyed if flooded.

5 Use hardwood floorboards; in many instances they will dry out. Polished concrete or tiling are also good options.

6 Build with single skin walls or non-cavity walls made of waterproofed fibro cement sheeting.

7 Incorporate recessed doors and windowsills to make it easier to flush out water.

8 Raise the house to at least the legal limit and keep in mind this could change in the future.

9 Include retractable doors both front and back to accommodate floodwaters being easily flushed out.