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 ONE BRICK AT A TIME: Malua Bay designer Paul Dolphin, who faced the New Year's Eve fires, says home owners who want to help mitigate the effects of climate change should consider their carbon footprint when rebuilding.

If there's one message a Malua Bay home designer hopes to share since facing the fires, it is to rebuild sustainably.

As a building designer, Paul Dolphin has helped Eurobodalla Shire home owners plan their rebuilds, while recovering from the threat of the New Year's Eve fire himself.

He said building to the appropriate bushfire rating was only part of the conversation.

Of equal concern was how to build a house that had no carbon emissions, or better yet, created positive contributions by producing renewable energy on site that could be fed back into the grid.

"We know these fires are being exacerbated by climate change and thus it is both an opportunity and an obligation to help people rebuild sustainably," Mr Dolphin said.

He said the perception that building sustainably was expensive was a misunderstanding created by generations of passing on the wrong information.

He said he had dedicated his career to finding a solution that was environmentally, economically and socially sustainable.

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Mr Dolphin's Malua Bay home features blockwork walls, an exposed concrete floor and a ventilation system that keeps the house cool during the summer and warm in winter.

There is no treated timber and minimised harmful chemicals built into the house, improving air quality.

Windows face north and a shade for the summer sun takes advantage of natural elements.

Mr Dolphin said home owners could have no energy bill, and save up to 80 per cent of energy over the house's lifetime if their house was simply designed well.

His house is a "small power station": it offsets his and his neighbour's energy through a battery and solar system.

He said sustainable houses were good for bushfire resilience in this way.

When power went down after the fires, his lights and refrigerator were still on due to the battery's emergency power supply.



 Paul Dolphin's home and office buildings are solar-passive, keeping cool in the summer and warm in winter.

When it came to building in a bushfire-prone region like the South Coast, another crucial factor was designing a house to the Bushfire Attack Level (BAL) rating, which depended on very specific circumstances and was stipulated by an assessment.

Two houses two streets away from one another could have completely different ratings so required different construction materials and vegetation clearing.

During the fires, some houses went up because they were in the path of the firefront, yet others caught light through ember attack.

All new houses should be designed for ember attack, Mr Dolphin said, however, the challenge was budget constraints.

"If you're in an area like the Eurobodalla, even if you're not close to the bush, there should be an ember attack standard," Mr Dolphin said.

"If it's not legislated, it won't happen."

Mr Dolphin said a question to ask was whether bushfire building regulations were for protecting property or life.

One option for home owners was to build a cheap house without protection and people would evacuate when fire threatened; the other to spend hundreds of thousands of dollars more to build a fire-resistant house.

The metal shutters, sprinklers and thickened glass needed in bushfire-resistant houses, however, would not improve sustainability.

Being fire-proof may not even be possible when battling flames of such intensity, Mr Dolphin said.

He said building to the highest bushfire rating - flame zone - was expensive .

"The problem with flame zone is there are very few products that are accredited to meet it," he said.

"There's only one manufacturer that makes flame zone windows in Australia."

Because of that, it could be tens of thousands of dollars added to your bill.

Alternative methods of construction like earth-sheltered houses would be expensive because they were not popular.

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Mr Dolphin said most houses that were built to the latest bushfire code on the South Coast survived the fires.

Older houses that were not built to standard were a cause for concern.

"We need to look at our existing housing stock and how we make that safer," he said.

That included regularly managing vegetation around a house.

Mr Dolphin said he was also interested in whether landscapes could be designed so fires could jump houses.

"I'm interested to know if there's landscape design we could do that protects and minimises the exposure of the building," Mr Dolphin said.

Through his role, Mr Dolphin said he noticed policy issues that had stymied progress in the shire.

He said State Government legislation slowed the rebuild process and few development applications had been approved since the start of the year.

"This legislation should have been identified and changed in January," he said.

"Nine months is a long time to be living in tents and shipping containers."

Mr Dolphin has been campaigning for the NSW Government to change legislation that would expedite the rebuild process.

He said current laws were not designed to expedite the process for bushfire victims, but rather to guide those wishing to add an extension or a new build.

"They're not designed for this set of circumstances," Mr Dolphin said.

"We need a planning policy that kicks in when people want to rebuild their house."

The 10/50 rule, for example, allowed clearing trees around a house without approvals for bushfire protection.

However, the rule did not apply if the house burned down.

The State Government also asked for ecologist reports for ecology that was no longer there.

"We've come across lots of issues that shouldn't have to apply if you're trying to rebuild," Mr Dolphin said.

For more information, go to <https://www.yourhome.gov.au/>

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