

Fletcher Building pioneers low carbon living with launch of innovative LowCO home

Tuesday 23 April 2024

As the world faces the urgent challenge of reducing carbon emissions, Fletcher Building has taken a bold step towards a more sustainable future with the official launch of LowCO, a groundbreaking residential project designed to reimagine home construction in New Zealand.

Homes are one of the largest contributors of carbon emissions meaning we must build differently to achieve a low-carbon future. Fletcher Building is uniquely positioned to drive this transformation by leveraging the materials and building expertise from across our different businesses.

“On average, the lifespan of a home is 90 years. We did some research and found that over that time homes emit 7x more carbon than acceptable if we are to keep global warming within the 1.5-degree Celsius limit.

“Fletcher Living wanted to show this doesn’t have to be the case. To prove it, we set about designing and building a number of different house typologies that use 7x less carbon than the average home. Called LowCO, these homes, redefine the standards of modern living by using less carbon along with significantly reducing energy consumption and water usage,” says Steve Evans, Chief Executive of Fletcher Building’s Residential and Development Division.

The recently completed first LowCO build, at Fletcher Living’s Waiata Shores development, includes a 3-bedroom detached home plus a three-unit terrace block. Both builds fit within New Zealand’s 1.5 degree carbon budget for new built homes.

To minimise carbon emissions considerable planning went into which combination of systems and products will reduce the embodied carbon of a home plus minimise the ongoing operational carbon that day-to-day life emits.

“Fletcher Living initiated the project but bringing it to life took a full team effort from Fletcher Building. Uniting around a singular goal to build better, more sustainable homes for future generations of Kiwis has been a powerful motivator.

“Together we’ve created a blueprint for sustainable housing, where future residents can anticipate healthier, more comfortable living with reduced expenses,” says Steve.

“We often get asked what it costs to build a high-performance home such as LowCO. While there are slightly higher upfront costs when building, from the point of view of the lifecycle of the home, it will cost less overall due to the reduction in electricity and water consumption.

“Understandably this is a different way of looking at the financials of home ownership. We would like to engage with banks and others on how long-term building performance could be taken into consideration at the point homeowners are looking for finance,” says Steve.

Head of Sustainability for Fletcher Living, Nicola Tagiston has led the project from the start and explains, “the LowCO project goes beyond building four high-performance homes. It is helping generate momentum around the important conversations we have to have as an industry about the future of housing in Aotearoa.”

“LowCO has benefited from the expertise of industry partners including Architype (architects), Sustainable Engineering (building science), Beca (landscape architecture), and Watercare. These organisations are passionate supporters of the goals of LowCO and have been instrumental in finding practical and realistic solutions that will allow us to build better homes.

A core part of the project is the smart monitoring built in throughout LowCO. This will allow Fletcher Living to capture three years of data on the home’s energy and water use. This data will advance the understanding of the thermal performance of LowCO and provide the intelligence to continue evolving the product. The data will also aid Fletcher Living’s decisions on which components to incorporate into its standard home build.

LowCO has recently been awarded 10 Homestar built rating from the New Zealand Green Building Council, which is the highest independent rating for a residential build.

“I hope that what we have achieved with LowCO will be both a beacon for the industry and a call to action that change is possible if we choose to think differently. To support this change, and encourage others to take up the technology and innovation throughout the industry, we will be making the LowCO architectural plans and product lists freely available on the Fletcher Living website,” says Steve.

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