

Golden Bay Cement consumes three million waste tyres as part of developing EcoSure®, New Zealand's lowest carbon GP cement

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Fletcher Building pledged its commitment to reducing carbon emissions in 2019 when it became the first building and construction firm in Australasia to set a Science-Based Target (SBT) for carbon reduction, promising to reduce its emissions by 30% by 2030.

Nick Traber, Fletcher Building's Chief Executive, Concrete says: "We are continuing to make solid progress on carbon reduction with our emissions for FY22 reduced by 12% from our baseline year of FY18 while fast scaling our circular and waste management offer.

"Our ability to achieve that reduction level has been led by a holistic approach from how we deliver our products and solutions to customers to innovating our manufacturing processes at Golden Bay.

"Particularly we have significantly reduced the carbon involved in producing cement by using alternative fuels, such as used tyres and construction waste, as well as using the latest binder technology. Since commissioning the project, Golden Bay has used more than three million end-of-life tyres. Combined with the coprocessing of construction wood waste, this has allowed us to divert more than 80,000 tonnes of waste from landfill, using it instead to fuel our cement kiln. Importantly, the use of these alternative fuels also means the cement produced at Golden Bay is now significantly lower in carbon than the ISCA baseline."

Nick Traber explains how it came about: "The cement we produce locally in New Zealand already has 20% less embodied carbon than imported products. However with Fletcher Building's commitment to 30% carbon reduction by 2030 we knew that 20% less was simply our starting point.

"We needed to think outside the box, or rather the cement bag to be more precise. The challenge was around what enhancements could we make to our manufacturing processes at our Golden Bay cement works in Whangarei to improve the plant's sustainability. We quickly realised that consuming used tyres and wood waste as alternative fuels was a win-win.

“When we started with the idea in 2015, we were aiming to replace 15% of coal with end-of-life tyres. Fast forward to 2022 and our rate of coal substitution is now at 50%, which has obviously delivered further reductions in carbon emissions, as well as helping to offset increased coal costs.

Gian Raffainer, General Manager at Golden Bay says: “Due to the very high temperature in the kiln, no smoke, odour or visible emissions result from the process and because leftover tyre, steel and ashes are incorporated into the final product, there is no waste or by-product. The cement which is called ‘EcoSure®’ while lower in embodied carbon at just 699 kgs CO_{2e}/tonne of cement, is still a general-purpose cement and performs as strongly as its predecessor ‘EverSure®’.”

Kiwis who want to use more environmentally friendly products, that meet New Zealand standards, in their projects no matter the size, will be able to buy it off the shelf and not worry about having to preorder a specified lower-carbon product.

“Using EcoSure in their concrete mix will make it easy for customers to improve the sustainability of their projects as we’ve already done all the hard work at our Golden Bay plant to reduce the embodied carbon,” says Gian Raffainer. “It’s incredibly exciting to launch New Zealand’s first low carbon cement offering at scale and give kiwis the choice to buy a decarbonised cement option.”

Nick Traber says: “Not only does EcoSure® make it easy for environmentally conscious consumers to use low carbon concrete on their projects, it’s also creating a sustainable circular economy - make, use, reuse and recycle. Here we’re not only safely disposing of waste and redirecting it from landfill, but we also thermally and materially valorize waste and create ways to reuse the materials.

“Fletcher Building firmly believes we can play a significant part in a carbon zero and circular future through sustainable innovation. We will be holding ourselves accountable to continue taking positive action to improve the world around us.”

EcoSure® will be available from next month.



