

Keltbray partners with Wagners and Capital Concrete to ensure Earth Friendly Concrete (EFC®) as part of ongoing commitment to sustainability

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Keltbray Group, together with key supply chain partners Wagners and Capital Concrete, has signed a limited exclusivity licence to supply and place Earth Friendly Concrete® in the UK.

As part of its ongoing commitment to innovation and sustainability and in order to ensure continued learning, knowledge dissemination and increased usage of low carbon concretes, Keltbray has made a financial guarantee to ensure 11000m³ of EFC® is placed by the end of June 2021. The commitment comes on the back of increased stakeholder interest and demand for significant reduction in embodied carbon within building and civil engineering projects.

The announcement comes following in-house design consultancy Wentworth House Partnership (WHP), part of Keltbray Group, made a commitment to specify Earth Friendly Concrete (EFC®) on all of its temporary works projects in the summer. On its Charterhouse Place site, WHP has used EFC® on all

temporary works which includes vault infills, thrust blocks for raking props and wind post foundation bases.

Keltbray is already a certified (EFC®) provider, having installed the first ever pile using Wagners Earth Friendly Concrete (EFC®) in London earlier in the year. A 900mm diameter, 25m deep anchor pile was installed at the Keltbray site at Landsec's Nova East, London Victoria project using Wagners EFC®.

The use of low carbon mixes and geopolymer concrete alternatives is widely accepted as a key opportunity in line with the UK government's decarbonisation commitments. It has also been identified as a focus area of the infrastructure industry's innovation platform i3P, in its Zero Carbon World initiative, where Keltbray Group has been an active member for the last year.

Keltbray has been working with leading Forensics Engineer, Royal Academy of Engineering Professor, Peter Robery, from Birmingham University who has undertaken a thorough, independent review of the testing data for the company.

Furthermore, over the last 10 years, the product has undergone rigorous lab testing supported by both leading academic and industry entities, and has already received accreditation to German Standard DIN 206. This is relevant to the UK in that, subject to project based testing the product can be considered a fully compliant alternative to conventional materials for both temporary and permanent works.

EFC® is a product manufactured by Australian firm Wagners and is a zero cement, geopolymer concrete supplied by Capital Concrete in London. The innovative product typically offers a 50% saving in embodied Carbon over and above standard piling mixes. EFC® has all the performance characteristics of Portland cement-based traditional concrete but uses a geopolymer binder system made from the chemical activation of two industrial waste by-products – blast furnace slag (waste from iron production) and fly ash (waste from coal fired power generation). This alternative eco-friendly binder technology reduces the carbon emissions associated with normal Portland cement, and has a much lower embodied energy.

The engineering and construction properties of this environmentally friendly concrete are as good, and in some areas better, than normal concrete. Significant performance advantages include improved durability, lower shrinkage, earlier strength gain, higher flexural tensile strength and increased fire resistance.

Darren James, Chief Executive Officer at Keltbray, says: "We're proud to be partnering with Wagners and Capital Concrete on this industry-leading initiative to provide low carbon concrete solutions. Keltbray is serious about our obligations to society to reduce the carbon footprint of construction and look forward to engaging with clients and customers to deliver the UK government's decarbonisation commitments."

Cameron Coleman, Chief Executive Officer at Wagners, says: "Wagners are extremely proud to see this Australian innovation leading the global concrete industry in placing zero-cement geopolymers at scale in marquee projects. Innovation requires vision and great partnerships to succeed. This partnership with Keltbray and Capital Concrete will deliver great outcomes for innovative and sustainable construction in the UK."

Luke Smith, Managing Director at Capital Concrete, commented: "We have seen a marked rise in customer demand recently for sustainable alternatives to traditional concrete, and Earth Friendly Concrete offers an

exciting solution. We anticipate this environmentally friendly concrete solution to soon become the construction product of choice for the London market.”

Stuart Norman, Managing Director for Piling at Keltbray, says: “We have been using EFC for temporary works elements over the last 10 months with great success. EFC is particularly suited for permanent works use within piled foundations, and Professor Robery has been assisting us in the review of the technical data we have. Having learned some practical lessons along the way, we are now extremely confident in the performance and durability of EFC and are actively recommending its use for permanent works foundation piles.”

Photo credit: Keltbray

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