

Ferrovial Agroman/ Laing O'Rourke Joint Venture - FLo Tideway Central – Kirtling Street



The Challenge

Tideway Central is part of Thames Tideway Tunnel, which is a new enhanced sewer system currently being built in London that will help protect the River Thames by tackling the problem of overflows from the capital's Victorian sewer. Kirtling Street is Tideway Central's biggest site, bringing London's sewer system into the 21st century as well as creating thousands of jobs and helping to boost the economy.

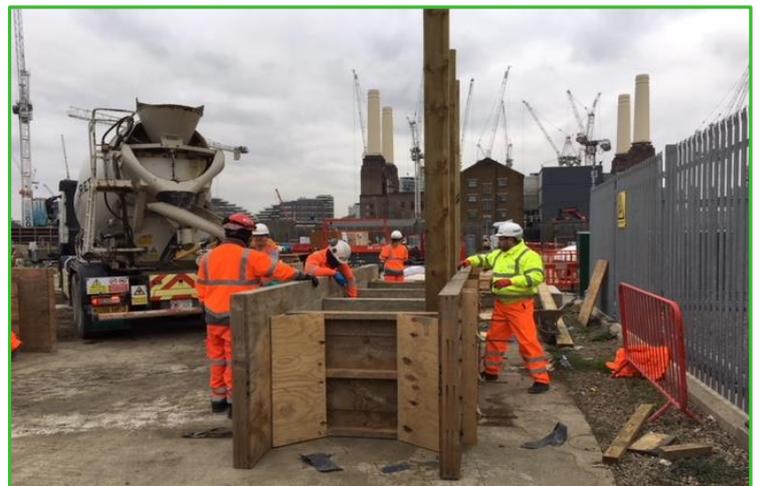
FLo Environmental Manager, Camila Bernal and FLo Section Engineer, Claire Kilrane expressed a desire to utilise Cemfree in an on-site trial, after learning about the potential carbon savings that could be made with this innovative product. It was decided that two hoarding post bases would be the ideal application for Cemfree to observe what it is like to mix, place and cure and how it performs in comparison to traditional concrete.

A Carbon
Saving of
85%
on this
Project

The Cemfree Solution

Cemfree requires no extra equipment or work to place, so is the ideal alternative to traditional concrete. Carrying out the Cemfree trial at Thames Tideway illustrated this to FLo's on-site team and made them aware of the potentially huge carbon savings that can be made with Cemfree if it was to be used on a larger scale.

FLo's sustainability policy cites the huge CO₂ burden that construction creates and how the company is compelled to rethink the way it designs, engineers and constructs its projects. Using Cemfree instead of the original CEM I mix saved over 85% in embodied CO₂ in this trial.



The Practicalities

When it came to pouring the Cemfree mix, it held together well and performed as a good concrete mix would. The groundworkers on-site all agreed that there was no difference between placing Cemfree and traditional concrete. They were impressed that there were no visible signs of dragging when a steel float was applied to the surface of the concrete and a smooth finish was easily achievable.

The Result

The pour took place in December 2017 at the Kirtling Street site, with London Concrete supplying the Cemfree mix. All parties involved on the day agreed that it had been a great success, with the concrete gang commenting on how easy it was to place and finish the material. By using Cemfree ultra-low carbon concrete for this particular application instead of the equivalent CEM1 mix, a reduction of over **85%** in the embodied CO₂ was achieved. Only 8m³ of Cemfree concrete was used on this occasion and a reduction of almost **2.5 tonnes** of embodied CO₂ was achieved - a massive saving for just one load of concrete.

