SIKA AT WORK
THAMES ROAD RECYCLING CENTRE, DARTFORD

CONCRETE: SikaFume®-50 S, SikaFiber® Novocon® and Sika® Fibermesh®-150

BUILDING TRUST

THAMES ROAD RECYCLING CENTRE DARTFORD

SIKA PROVIDES CONCRETE SOLUTION TO MEET PROJECT'S DURABILITY NEEDS

The Thames Road Recycling Centre is located in Dartford and open every day to residents in vans as well as businesses.

The centre's general environment means extreme abrasion is a common occurrence and, due to its busy location, encounters heavy footfall. As a result, the concrete slabs beneath its waste bays have experienced increased damage over time.

A full refurbishment of these slabs was required and J B Riney, a Civil Engineering Company and the incumbent main Contractor for the borough, was asked by Bexley Council to re-concrete the facility.

Following a recommendation to the council from the project's concrete supplier, Euromix, Sika products were used in the solution to ensure robust, long-lasting improvements were made to the centre.

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The Requirements
Due to the nature of the facility's function, durability was a vital factor to be considered when specifying products for the project as heavy machinery is operating on the concrete frequently, moving waste.

The concrete used needed to be resistant to continuous impact from the waste that the centre's users regularly unloaded. 120m3 of concrete slabs were required for the centre's scrap yards, recycling plant floors, industrial flooring, docksides and loading bays.

As the centre is open daily, it was also important that the project had a quick turnaround and that the facility would be able to provide its service once again, as soon as possible.

The Solution
J B Riney opted for Tarmac's TOPROC SY concrete, powered by Sikafume® -50S, to be used for the project because of its durability, high performance characteristics and the fact that it's designed to be effective in extreme environments.

SikaFume®-50 S, a microsilica admixture which increases durability in high-traffic areas, was added to the concrete to improve the mixture's strength, saving money and time whilst improving operational efficiencies for the project team.

The product also offers a lower maximum temperature rise to ensure that cracks do not appear in the reformed concrete, which was especially important given the centre's need for resistance against heavy materials.

Sika® Fibermesh®-150, a micro-synthetic fibre system for concrete was included in the admixture solution to improve impact, shatter and abrasion resistance alongside Sikafiber® Novocon®, a range of steel fibres that are designed specifically for the reinforcement of concrete.

The Sikafiber® Novocon® product is a cold drawn wire fibre, deformed with hooked ends to provide optimum performance within the concrete mix. For this project, utilising Sikafiber® Novocon® meant that there was no need for concrete pumps to be used and ultimately this helped with the speed of the project, as trucks could drive straight into the centre to pour the mixture in an efficient manner.

Using SikaFume®-50 S and Sikafiber® Novocon® also provided a wide joint spacing for the application of the solution, which allowed the concrete to expand and contract as the temperature changed.

A Joined-up Approach
Euromix's strategy of using Sika's products alongside TOPROC SY was the perfect solution for the project, as they could combat the general environment of a recycling centre.

The new and improved concrete at the facility will provide resistance against extreme abrasion, scraping materials, heavy goods and objects being dropped on the surface consistently.

Thanks to Sika's involvement, Euromix avoided working on the solution with multiple partners for the job, as Sika was able to provide both an admixture and fibres for the solution. Consequently, offering an efficient, durable and cost-effective approach to the project.

David Griffiths, procurement manager at J B Riney, commented: "Working alongside Euromix, who are part of the same group of companies as J B Riney, meant that we could confidently work with and deliver exactly what our client was looking to achieve.

"This was further complimented by the use of Sika and Tarmac branded products, which meant as a collaboration throughout the design, delivery, pour and laying stages, we were able to deliver a product and service that was unrivalled."

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