

Case Study



PROJECT INFORMATION

- Project name:** Rookery South ERF Plant
- Client:** Hitachi Zosen Inova
- Sub-contractors:** Byrne Bros London
- Location:** Stewartby, Bedfordshire, United Kingdom

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PROJECT REQUIREMENT

Task at Hand

The new Rookery South Energy Recovery Facility (ERF) is designed to process around 550,000 tonnes of non-recyclable residual waste annually, decreasing land-fill space, yet, it will produce over 60 megawatts of baseload electrical energy; enough to power 112,500 local homes and businesses, and recover valuable resources and byproducts for further use.

Compared to continued landfilling, it also makes it possible to recover significant amounts of metals and reduce CO₂ emissions. The disused London Brick Clay pit provided the ideal setting for the construction of the Energy from Waste.

Engineers had to find a solution for the concrete floors in the facility so that they would have a wear-resistant surface capable of handling the constant supply of trucks and loading shovel traffic.

After less than three years of construction, the Rookery South Energy Recovery Facility has successfully completed its commissioning phase and has been handed over to the operator, Covanta, within the original contractually agreed schedule.

DCP SOLUTION

Don Construction Products have been manufacturing dry shake systems and other high-quality systems since the 1930s. investing 3.5 million in the state of the art powder plant located in Suffolk.

For this project, Don Construction Products played its part by supplying **TIBMIX** which is one of its renowned dry shake systems to ensure the newly installed concrete had a wearing surface capable of dealing with a constant supply of trucks and loading shovel traffic.

The London based contractor always uses either **Monoshake** or **TIBMIX** from DCP's range of dry shake systems when a dense surface and special wear resistance are required.

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DCP SOLUTION

TIBMIX is a non-oxidizing, chemically inert, metallic dry shake floor topping for monolithic floors. The product contains a blend of specially graded aggregates, additives, and Ordinary Portland Cements.

It is an easily applied, premixed, dry shake that produces a dense, tough, abrasion and wear resistant surface, also resistant to oil and grease especially suitable for heavy industries and power plants.

The type of concrete mix needed was highly specialized to ensure proper performance, the concrete substrate was fully compacted and smoothed, and bleed water was allowed to rise to the top of the slab and evaporate.



After the concrete has been floated, and light foot traffic would leave an imprint of about 3 - 6 mm (a quarter of an inch), it was ready to receive the dry shake hardener **TIBMIX**. For large floor constructions, **TIBMIX** was spread and trowelled satisfactorily in one stage by mechanical spreaders.

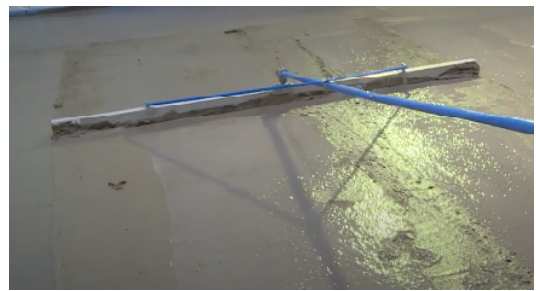
For manual application, this hardener was applied in 2 stages. The first stage required 2/3 of the total quantity of **TIBMIX** to be spread onto the concrete surface, where it was allowed to absorb any moisture from the concrete.

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DCP SOLUTION

Once the slab had an even, solid-colored appearance, this had indicated that all moisture has been absorbed. The surface was floated again, and afterward, the remaining quantity of **TIBMIX** was evenly applied over the surface. The concrete was then floated for a final time.

Applied to newly installed concrete the **TIBMIX** Dry shake system was able to transform the surface wear capabilities by 300 - 500% into a special wear class, ideal for such harsh environments and heavy industries.



Products and Quantities Supplied

- **TIBMIX:** 20 Tons

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