

European Oat Millers

Case study

Focus products: Intercrete® 4879, Intercrete 4871, Intercrete 4800, Intercrete 4803, Intercrete 4870, Intercrete 4822, Intercrete 4891

Location: Bedford, UK

Client: W. Jordan (Cereals) Ltd

Specifier: Richard Jackson Engineering Consultants

Main contractor: Gunitite (Eastern) Ltd

Summary: Concrete repairs and decorative anticarbonation protection of the main mill building



Background

European Oat Millers is the second largest oat miller in the UK and Europe. The company produces a range of oat and cereal products that are used in a variety of retail lines found in most supermarkets and healthfood shops. The firm trades across three continents, with its distributor network reaching as far as the Middle East and Africa.

More than 120,000 tons of grain are processed across European Oat Millers' two main sites, of which the primary site is the Bedford mill based in the heart of prime arable land in central England. The Bedford site houses a state-of-the-art manufacturing plant but the 1940's thin walled concrete mill structure required significant refurbishment work as it was suffering from carbonation and chloride contamination. As the site is a busy manufacturing plant, it was important that there was only minimal disruption during the remedial works.

The solution

We worked closely with Richard Jackson Engineering Consultants and Gunitite (Eastern) Ltd to provide an effective solution. High levels of chlorides were identified so Intercrete 4879, a surface applied migratory corrosion inhibitor, was used to provide further protection

from the risk of corrosion. All exposed steel reinforcement was treated with Intercrete 4871 before areas of spalled and defective concrete were reinstated with Intercrete 4800, a structural grade, waterproof repair mortar that can be applied up to 80mm in a single application, even in overhead situations. Intercrete 4803, a low density repair mortar, was also used in areas where lightweight, cosmetic repairs were required. To prevent rapid drying out of the mortars, Intercrete 4870 was applied as a fine mist spray to the surface immediately after finishing.

The appearance of the external façade of the building needed to be enhanced and it was also necessary to provide overall anticarbonation protection. Surface imperfections and voids were first filled with Intercrete 4822 fairing coat before overcoating with Intercrete 4891, a high build decorative coating which provides concrete substrates with outstanding protection against carbon dioxide diffusion. With a lifespan of at least 15 years before first maintenance, Intercrete 4891 is CE marked in accordance with the demands of BS EN 1504, the pan European standard for concrete repair and it is ultra-fast drying, allowing two coat applications on the same day. Intercrete 4891 has a water-based composition so it is ultra low odour and does not release any hazardous solvents, which was a critical consideration in this food manufacturing environment.