International

Flood Defence Barrier

Case study

Focus products: Intercrete 4844, Intercrete 4840

Location: Canvey Island, Essex, UK

Client: Environment Agency

Specifier: Atkins

Contractors: Interserve and JB Specialist Refurbishment Ltd

Summary: Corrosion protection of steel piling on three sites

Background

This project involved the refurbishment of flood defence barriers and sheet pile installations over three site locations in and around Canvey Island, Essex. These installations provide protection to the neighbouring areas of Canvey island, Benfleet and Pitsea with varying difficulties of access to facilitate the works dependent upon the site location.

All three sites comprised sheet steel pile installations providing bank and flood protection, which upon inspection exhibited extensive signs of corrosion due to continued exposure to salt spray and cyclical tidal immersion. On the river side, this cyclical submersion caused rust staining and corrosion throughout, and as such a high performance anti-corrosion coating solution was sought which would provide years of effective corrosion protection even when applied to the steel in this continually damp environment.

The solution

Intercrete products were chosen for this project due to their outstanding track record of use in coastal and marine environments. The fact that Intercrete's products are developed using waterborne technology was also a vital consideration, as they offer environmental benefits and do not pose any threat to marine life, unlike solvent-based products. Following removal of corrosion by-products by wet grit blasting, Intercrete 4844 was applied with a pointing gun to flush fill the clutches and this was followed by a two-coat application of Intercrete 4840 using airless spray techniques.

Intercrete 4840 is a rapid curing, water-based, two component cement and epoxy modified polymer modified coating which will withstand early immersion within just two hours of application, offering high resistance to wash-out. Residual surface dampness does not adversely affect adhesion to the substrate and Intercrete 4840 requires much less surface preparation than alternative products as it achieves bond when just surface rusting has been removed. CE marked to the rigorous demands of BS EN 1504, Intercrete 4840 forms a durable barrier to chlorides, oxygen and water, offering an excellent defence to corrosion for years to come.

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