

Project Profile - Coastal Structures



PROJECT

Creekmoor Sheet Piles, Poole Harbour, Dorset

SUMMARY

Corrosion protection of steel piling totalling 480m²

PRODUCTS

Cemprotec Clutch Filler
Cemprotec E942

CLIENT

The Borough of Poole

MAIN CONTRACTOR

Balfour Beatty

SUB CONTRACTOR

Coastal Preservation Services

BACKGROUND ►

This project involved the maintenance of existing sheet piled walls in Holes Bay, Poole Harbour. Located within a coastal preservation site, the Borough of Poole and Balfour Beatty were seeking a long-term corrosion protection solution for a 480m² area of sheet piling situated in an inter-tidal stormwater culvert in the Poole suburb of Creekmoor. The steel piling was showing extensive signs of corrosion, including severe rust staining, due to continued exposure to salt spray and cyclical tidal immersion.

As the sheet piles are frequently submerged and are subject to tidal fluctuations, one of the concerns was seeking a remedial solution that could withstand early immersion during the refurbishment works. It was also important that the chosen repair and protection products could demonstrate excellent adhesion to the steel substrate in this constantly wet environment.

THE SOLUTION ►

Due to the presence of corrosion by-products, marine growth and other contaminants, it was important that thorough surface preparation was carried out and the sheet piling was cleaned by UHP blasting to a sound, contamination-free surface. **Cemprotec Clutch Filler** was then applied with a pointing gun to flush fill the clutches and this was followed by a 2mm application of **Cemprotec E942** using airless spray techniques. Both products are rapidly applied, as **Cemprotec Clutch Filler** only needs to stabilise before application of **Cemprotec E942** and on marine sheet piling a 2mm application of **E942** can be built up as a single coat to enable completion in just one shift.

Cemprotec E942 is a waterborne, two component, cement and epoxy modified polymer coating which is fast curing and withstands early immersion within just two hours of application, offering exceptional resistance to wash-out. Used as a stand-alone anti-corrosion coating, it requires far less surface preparation than alternative products as it achieves bond when just surface rusting has been removed. The water-based nature of **Cemprotec E942** is a critical consideration for projects such as this, as unlike solvent-based products, it does not pose any threat to marine life and can be safely applied.

The dense matrix of **Cemprotec E942** offers low permeability to water, even at 10 bar positive and negative pressure, and very high diffusion resistance to the ingress of chloride ions, oxygen and acidic gasses. It is also CE marked in accordance with the demands of BS EN 1504.



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