

Project Profile - Utilities



PROJECT

Sutton Hall Water Treatment Works, Cheshire

SUMMARY

Chemical resistant protection of new concrete bunds

PRODUCTS

Fastfill
Cemprotec EF Primer
Curing Membrane WB
Cemprotec E942

CLIENT

United Utilities

MAIN CONTRACTOR

GCA

APPLICATOR

Construction Techniques Ltd

BACKGROUND ►

Sutton Hall Water Treatment Works in Ellesmere Port, Cheshire, serves a population of 0.5 million people on the Wirral Peninsula. Raw water is extracted from the River Dee and pumped up to the reservoir on the Sutton Hall site. This water is then processed through a gravity fed multiple phase process comprising a number of stages such as pH correction, sand filtration and chlorination.

An upgrade of the site facilities included the construction of a number of concrete bunds to store tanks that contain dosing chemicals, including those comprising highly caustic Sodium Hydroxide at 27% concentration. In order to ensure structural integrity of the bunds and eradicate the risk of environmental harm from liquid spills and leaks, a chemical resistant lining was required for application to the tanks. Time was of the essence and products suitable for fast track construction were a necessity for this project, as the protective coating had to be applied to the new concrete of the bunds within days of the concrete being cast.

THE SOLUTION ►

Cemprotec E942, a water-based, epoxy and polymer modified cementitious coating, was specified as it could be applied to the damp, freshly placed concrete and rapidly cures to form an exceptionally tough, durable finish. It is designed for the waterproofing and protection of concrete where enhanced chemical and abrasion resistance are required and forms excellent resistance to water, chloride ions and oxygen, as well as aggressive chemicals. **E942** is rapidly applied by brush or spray and because it has a waterborne formulation, releases no hazardous solvents or heavy odour during application. It is also CE marked in compliance with EN1504, the pan European standard for concrete repair, so can be relied upon with absolute confidence. **Fastfill** repair mortar was first applied to the concrete to repair defects, due to its ability to set in as little as 10 minutes, before the application of **Cemprotec EF Primer**, **Curing Membrane WB** and **Cemprotec E942**. Flexcrete products are well proven at Sutton Hall Water Treatment Works as another Flexcrete material, **Cementitious Coating 851**, was used to line the activated carbon filter tanks some 10 years ago and has performed exceptionally well.



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