

Project Profile - Coastal Structures



PROJECT

Tiverton River Wall, Devon

SUMMARY

Concrete repairs and anti-carbonation protection of a 650m stretch of the river wall

PRODUCTS

Monomix, Monolevel 844SP, Monodex Smooth, Bond-Prime

CLIENT

Environment Agency

CONTRACTOR

Atkins Global
Bridge Civil Engineering
Southern Concrete Services Ltd

BACKGROUND ►

Following severe flooding in the Devon area in the 1960's, a flood defence scheme was created in Tiverton in 1967, comprising the construction of a reinforced concrete retaining wall on the east and west bank of the River Exe.

The structure remained sound for many years but a survey in 2012 revealed that the concrete was showing signs of cracking and degradation due to the damaging effects of carbonation. The Environment Agency sought to extend the life of the structure and protect the residential and commercial properties in the area from flood damage. Atkins Global approached Flexcrete to provide a solution and the company's concrete repair materials were specified, along with a decorative membrane, for the repair and protection of a 650 metre stretch of the western bank wall.

THE SOLUTION ►

Monomix, a technically advanced single component cementitious mortar, was first used to repair areas of spalled concrete. It is extremely rapid hardening and develops high early strength to repair and protect the surface. **Monolevel 844SP** was then applied as a render at a thickness of 6mm to provide a fair-faced, waterproof and anti-carbonation finish. **Monolevel 844SP** is an engineering quality fairing coat which reinstates low concrete cover and, like **Monomix**, it is CE marked in accordance with EN 1504 Part 3, the pan European standard for concrete repair.

For an aesthetic finish and to provide additional anti-carbonation protection, **Monodex Smooth** was applied following an application of **Bond-Prime**. A high performance, water-based, high build decorative coating, **Monodex Smooth** protects against water ingress and provides high diffusion resistance to carbon dioxide. It allows substrate moisture to escape without blistering or loss of adhesion and is independently approved to EN 1504 Part 2 for coatings. **Monodex Smooth** is available in a range of decorative colours and light grey was specified for this project.



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