

## Project Profile - Coastal Structures



### PROJECT

Dawlish Sea Wall, Dawlish Warren,  
South Devon

### SUMMARY

Repair and protection of 300m long  
concrete sea wall

### PRODUCTS

**Steel Reinforcement Protector 841,**  
**Fastfill, Curing Membrane WB,**  
**Marine Mortar S**

### CLIENT

Environment Agency

### SPECIFIER

Atkins Global

### CONTRACTOR

BAM Nuttall

### BACKGROUND ►

Dawlish Warren is a popular seaside holiday resort at the mouth of the Exe Estuary in South Devon. It has a 500 acre Nature Reserve and a Blue Flag sand-dune backed beach. Dawlish Sea Wall is approximately 300m long and dates back to the 1970's. Based in a heavy tidal area, there were a host of damaged concrete areas along its length. Atkins Global were seeking a range of concrete repair products which are well proven in coastal and marine environments.

### THE SOLUTION ►

Concrete repairs were required to a number of areas, including precast units such as steps and beams, intermediate beams and capping beams. Following thorough preparation, exposed re-bars were treated with **Steel Reinforcement Protector 841**, a cement based corrosion preventative coating which provides effective long-term protection from chloride ion attack.

Voids, spalled and cracked areas of concrete were reinstated with **Fastfill**, a rapid setting, Class R4 structural repair mortar which is fully waterproof to 10 bar and like **841**, is approved under Regulation 31(4)(a), benefits from British Board of Agrément (BBA) approval and is CE marked in accordance with the demands of BS EN 1504. It can be bulked out to 300mm and due to its rapid setting within just 10 minutes at 20°C, it was ideal for these repairs in tidal areas. In order to protect the mortar from sunlight and drying winds, **Curing Membrane WB** was also applied.

**Marine Mortar S**, a structural repair mortar specifically designed for marine and tidal areas, was specified for vertical repairs. Perfectly suited for use in areas subject to early immersion, **Marine Mortar S** can be rapidly applied up to 50mm on a vertical plane and demonstrates excellent resistance to wash-out. It is fibre reinforced which ensures outstanding tensile and impact strength, achieving strength of up to 60MPa within just 28 days.

Flexcrete products were ideal for this project as they provide exceptional protection against chloride attack and are water-based, releasing no hazardous solvents or strong odour during application, making them safe to use and posing no danger to the public or marine life.



FM 41091  
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Health & Safety

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