

### Martello Tower

Essex, England

Surface material: York stone

Products: 40-SK and STAIN-PROOF™

Project completed: 2008

Accredited Applicator:

Really Safe Flooring

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## The Project

One of the greatest threats to maintaining the historic environment in Essex and the rest of the East of England is coastal erosion. This has put some of the most evocative structures on the wind swept Essex coast in great danger, including our most famous Martello Towers. The Martello Towers, built between 1808 and 1812, are historic monuments to a time when England was threatened by possible invasion from France, which back then was ruled by Napoleon Bonaparte.

The project required the sealing of one of the Martello Towers on the Essex coast, which now is a privately owned residence. The tower is constructed with over 750,000 bricks with walls up to 15 feet (4,5 metres) thick, and the roof up to 10 feet (3 metres) thick. The roof is finished with York flagstones and was designed to house 3 cannons. The tower is protected by surrounding battle walls.

Because the tower is listed as a historic monument, it was imperative the sealer chosen would have no visual impact on the building's original brickwork and York Stone. Dry-Treat's Stain-Proof™ and 40SK were able to fulfil the exceptional standards and detailed list of requirements of this particular project.

## Special Requirements

- 1) In this type of exposed marine environment, a breathable sealer was required that would provide maximum protection against salt efflorescence coming up from underneath the brick while still letting moisture from underneath to evaporate freely.
- 2) The tower is a grade 1 listed building and an historic monument, making it imperative the sealer would not have any visual impact on the tower.
- 3) The tower had developed a number of leaks through the roof.
- 4) The speed of the application and the lifespan of the sealer were important to ensure minimal interference with the (future) plans of the home owner.
- 5) The required sealer would also have to:
  - ❖ Prevent staining
  - ❖ Help to prevent moss and mildew growth in the humid British climate
  - ❖ Prevent chloride salt ingress
  - ❖ Facilitate the cleaning process
  - ❖ Not break down under a rigid cleaning regime



*Prior to the Dry-Treat treatment*



*After the Dry-Treat treatment*

## The Dry-Treat solution

Dry-Treat's world leading invisible impregnators STAIN-PROOF™ and 40-SK offered a complete solution for sealing this historic residence.

The chemistry of both STAIN-PROOF™ and 40-SK is unique. Specially engineered molecules in STAIN-PROOF™ are thousands of times smaller than other sealers. This allows them to penetrate much deeper into the pores of the material where they bond permanently by chemical reaction. A sufficiently deep, permanent water and oil-repellent barrier is created, which is able to effectively protect against staining and even structural damage caused by water ingress, and which stands up to highly alkaline cleaning chemicals and commercial cleaning techniques such as high pressure hosing. STAIN-PROOF™ sealer does not affect the look or breathe-ability of the surface because it only works from inside the material. STAIN-PROOF's unique 'dry' barrier of protection also discourages moss and mildew from infecting the pores of the treated material – where there is no water to feed off.

Dry-Treat's 40SK is suitable for a wide variety of applications. Most importantly, 40-SK is able to consolidate loose and friable surfaces, for example sandstone, without trapping moisture in the stone which can lead to unsightly spalling. Also, 40-SK is an exceptional chloride ion salt screen, which is ideal for a marine area such as the Essex Coast.

The tower was sealed with two coats of 40-SK and STAIN-PROOF™ by Accredited Dry-Treat Application Company *Really Safe Flooring*. The extended lifespan of both sealers will not cause future interference because, unlike many other impregnators, resealing every couple of years is not required. The surfaces are able to be maintained using, at most, only light scrubbing and mild non-toxic detergents, which perfectly suited the requirements of the client. Because of Dry-Treat's unique breathability treatment, the clients have reported their home feels significantly dryer.

The project is backed by a standard, 'no fine print' STAIN-PROOF™ and 40-SK 15-year performance warranty.

