

# BELZONA REBUILDS WORN STONE STAIRCASES BUILT IN 16TH CENTURY

ID: 4730

Industry: Buildings & Structures  
Application: FPA-Floor Problem Areas  
Substrate: Stone  
Products: \* Belzona 4131 (Magma Screed) ,

Customer Location: College in Cambridge, UK  
Application Date: August 2012

## Problem

The stone steps on several staircases in this Grade 2 listed College had become badly worn over the last 500+ years of use and so were considered a Health and Safety risk. The steps had worn by up to 75mm deep in the centre, sloping towards the front so were slippery when wet. Due to the design of the stone steps it was not possible to cut out the worn area and repair in the traditional manner of inserting a new block of stone because this would weaken the staircase.



## Photograph Descriptions

- \* Worn stone steps before, with wear up to 75mm deep in centre of step ,
- \* Wooden formers in place and Belzona 4911 being applied ,
- \* Belzona 4131 being installed with wooden former helping keep the repair flat and level ,
- \* Example of step rebuild completed with Belzona 4131 ,

## Application Situation

Badly worn stone steps on staircases built in the 16th Century

## Application Method

Application carried out according to Belzona Know-How System Leaflet FPA-1. The top of the stone steps were abraded to create a clean surface and a wooden former system was installed to ensure the repairs were level and all to the same width (specified by the College). Belzona 4911 (TX Conditioner) was applied to prepared surface and the worn step areas were then rebuilt with Belzona 4131.

## Belzona Facts

Trials had previously been carried out to rebuild the worn steps with cement based products which quickly failed. After successful

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trials with Belzona 4131 the College specified it for the rebuild of these 165 steps. The step rebuilding was taking place during the busy College holidays when other contractors needed to use the stairs during the day time. Therefore the fast cure time of Belzona 4131 meant the steps could be rebuilt after 16.00 when the other contractors had left for the day and be cured in time for them to be walked on at 07.00 the next morning. By using Belzona 4131 no disruption was caused to other projects going on in this building at the same time.

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