



Saints Peter Paul and Philomena Church

Completed in 1933 and Grade 2 listed, Saints Peter Paul and Philomena Church is a basilica like structure clearly visible from the sea. During World War 2 the Church was nick named the 'Dome of Home' by seamen returning to Liverpool. By 2008 the church had closed after falling into a severe state of disrepair.

Location
New Brighton, Wirral Peninsula, UK

Client
Lawrenson Associates

Completed
November 2020

Structure
Historic Building



The Problem Identified

Exposed on all sides to a chloride rich environment, coastal chlorides had contaminated various reinforced concrete structural elements of the Church, including the dome ring beam. Expansive rebar corrosion had led to areas of cracking and spalling of the concrete cover.



The structural problem identified



The Solution Developed

PatchGuard Connect Galvanic Anodes were installed at 400mm centres around the circumference of the ring beam. The zinc alloy anodes were embedded into 25mm diameter holes inside an activation mortar and wired together in strings of maximum 40.

The targeted galvanic anode system was designed to mitigate corrosion for up to 20 years. Because the ring beam was also protected by a fairing coat and a protective coating, subject to periodic maintenance of the coating, the anode system could well extend beyond two decades.



The solution developed



The Benefits Provided

The sacrificial system offers long term corrosion protection to the reinforcing steel in the structure. The installed system will counter on-going corrosion and prevent concrete delamination.

A key aim of the restoration project was to effect long term maintenance free repairs as accessing the Church, particularly around the dome, is a costly exercise.

CPT Products Used



PatchGuard Connect



DuoCrete PG Mortar

