



Concrete Repair & Cathodic Protection

Harlech Swimming Pool, Harlech, Wales

Client
Friends of Harlech

Principle Contractor
Freyssinet Limited

Specialist CP Contractor
CCSL

Value
£50,000

Works Commenced
December 2011

Works Completed
January 2012

In 2007, the future of Harlech swimming pool, which was built in the 1970s, was in doubt when Gwynedd Council decided it could no longer afford to run it. A community company set up to save Harlech swimming pool from closure was established, and in 2010 they were handed the keys to the pool, and had secured grants from the lottery and Welsh Government to fund essential refurbishment works.

In July 2011 Freyssinet were appointed to carry out condition surveys of the swimming pool crawl duct walls and soffits to establish the scope and quantum of repair required to the concrete surfaces.



The survey undertaken included a 100% sounding survey of the service void swimming pool elevations and soffits, a cover meter survey to establish reinforcement density and continuity testing to estimate the extent of electrical bonding that may be required during concrete repair to make the reinforcement compatible with electrochemical repair techniques.

Results of the survey found there to be deteriorating reinforcement steel within the crawl duct walls and soffit, along with areas of cracked and spalling concrete. Freyssinet put forward a solution of concrete repair and the installation of a cathodic protection (CP) system, appointing their sister company CP specialists Corrosion Control Services Limited (CCSL) to provide the design and specification for the CP system.

The perimeter crawl ducts where the works were to be carried out were classified as confined space, therefore, careful planning, correct equipment and monitoring as well as competent certified personal was all essential to complete the project in a safe manner.

The project was completed in two stages. Initially, Freyssinet broke out all delaminated and spalled concrete, then tested and ensured continuity of the reinforcing steel and completed concrete repairs. The repair areas were then allowed to cure prior to the installation of the ZLA "sticky zinc" galvanic CP system. The locations of zinc were marked out on the walls and soffit, and small pockets were broken out to allow for studs to be welded to the reinforcement and then electrically connected to the ZLA.

The works were completed to the satisfaction of the Friends of Harlech.

- 1 Harlech Swimming Pool
- 2 The crawls ducts were classified as confined space
- 3 Exposed rebar / Concrete repair
- 4 Installation of the CP system

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