

Structural Waterproofing Principality Stadium, Cardiff

Client: Main Contractor

Completed: 2019

Case Study No: 302

- Commercial Waterproofing
- Type A (Barrier) Protection
- Type C (Drained) Protection

The Project:

Construction of a new plant area to house the installation of over £3.5m worth of permanent generators to power the Principality Stadium during events.



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Principality Stadium - The Problem

Since opening in June of 1999, the Principality, formerly Millennium, Stadium in the heart of Cardiff has become a world famous sporting and events stadia.

Alongside it's 74,500 seat capacity and retractable roof, the stadium's location in the centre of Cardiff makes it an ideal choice for many types of large scale events.

In it's 20 year history, the Stadium has hosted thrilling Six Nations finale's, FA Cup, European and World Cup Finals, World Championship Boxing, a World Rally stage and countless music superstars including Beyonce, U2, Ed Sheeran & The Rolling Stones.

In 2019, the stadium owners, the WRU, commissioned the installation of permanent generators to be situated in a new purpose built plant room beneath the main stadium entrance to power the stadium during events.

The new plant room would be partly situated below ground & would require specialist waterproofing against both groundwater ingress and large amounts of surface water that is often directed toward the plant room locale.



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Principality Stadium - The Solution

Protectahome were recommended by a leading UK waterproofing manufacturer to act as the waterproofing design consultant and contractor on the project.

Working in conjunction with the construction & electrical contractors to ensure a cohesive sequencing schedule, Protectahome's CSSW qualified surveyors designed a combined Type A (Barrier) and Type C (Drained) Protection Waterproofing System in line with the requirements set out within BS8102:2009.

The Type A system encompassed the use of a cementitious tanking slurry applied using specialist peristaltic spray equipment with additional repair mortar applied to weakened points in the existing blockwork structure.

The Type C system incorporated the use of Cavity Drain Membranes linked to perimeter drainage channels and appropriately positioned service/maintenance ports.

The installation was completed by Protectahome's specialist, NVQ qualified, waterproofing operatives to a tight schedule which allowed time pressured follow on works to be commenced as planned.

A long term company guarantee was issued upon completion of the works and Protectahome have since been approached by the client to work on another high profile project nearby.



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