

# Conversion to Student Accommodation Former Central Fire Station Aston, Birmingham

Client: Watkin Jones Construction

Completed: 2015

## Case Study No: 247

- Commercial Waterproofing
- Type C (Drained) Protection
- Over 5120m<sup>2</sup> of installation

**The Project:**  
To convert the  
Grade II listed former  
Central Fire Station  
in Birmingham to  
provide 450 student  
accommodation  
rooms for Aston  
University.



**PROTECTAHOME**

**WATERPROOFING SOLUTIONS**

[www.protectahome.co.uk](http://www.protectahome.co.uk)

0845 601 1980



# Former Central Fire Station, Birmingham - The Problem

Birmingham's Former Central Fire Station at Lancaster Circus was to be refurbished and converted into student accommodation for nearby Aston University.

When completed the grade II listed building that was once home to Birmingham's Fire Department HQ and dating back to 1935, will house 450 student rooms over its 130,000 sq. ft. 1.7 acre site.

The development was to utilise the basement level of the building that suffers, in part, with water ingress from the ground.

Working with the developer Watkin Jones, our experienced team of waterproofing designers collaborated to develop a waterproofing solution appropriate for the risk and sympathetic to the historic nature of the existing building.



THE BASEMENT INFORMATION CENTRE MEMBER

BSA British Structural Waterproofing Association



**PROTECTAHOME**

**WATERPROOFING SOLUTIONS**

[www.protectahome.co.uk](http://www.protectahome.co.uk)

0845 601 1980



# Former Central Fire Station, Birmingham - The Solution

As the basement would be utilised as habitable accommodation the waterproofing solution had to be capable of delivering and maintaining a Grade 3 Environment as defined within BS8102: 2009.



THE  
BASEMENT  
INFORMATION  
CENTRE  
MEMBER

British  
Structural  
Waterproofing  
Association



A maintainable Type C (Drained Protection) Waterproofing system was decided on that would incorporate the use of Cavity Drain Membranes and several sump and pump chambers.

In total 5120m<sup>2</sup> of 8mm Cavity Drain Membrane was fitted to basement level walls and floors in order to protect the accommodation against any ground water ingress that may penetrate the structure.

10 sump and pump chambers were installed at strategic locations each housing 2 specialist automatic sump pumps and a battery backup to aid in the event of a temporary power interruption.

Over 500 metres of perimeter drainage channel was installed around the wall/floor junction to redirect free water from behind the membranes to one of the 10 sump chambers.

The system fully complied with the requirements set out within BS8102 and a Protectahome long term guarantee was issued upon completion.



**PROTECTAHOME**

**WATERPROOFING SOLUTIONS**

[www.protectahome.co.uk](http://www.protectahome.co.uk)

0845 601 1980