

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 5120m² 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.



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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 and manufacturer Triton Systems 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.



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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 5120m² of Triton Platon P8 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 Triton Aquapump Pro XL pumps and a battery backup to aid in the event of a temporary power interruption.

Over 500 metres of Aqua channel 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.



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