



Duration

**2 weeks per
block**

Status

Ongoing

CCUK PROJECT INSIDER WOLVERHAMPTON TOWER BLOCKS

CARBON FIBRE STRENGTHENING

www.fibrwrap-ccuk.com

Client

**Wolverhampton
Council**



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01

Introduction

Working on behalf of some large contractors and very closely with Wolverhampton Council, CCUK has designed Carbon Fibre Strengthening solutions to enable the refurbishment of the HRRB's for electrical, mechanical and sprinkler installation.

CCUK is currently carrying out carbon fibre design and installation on 7 different projects on the £100 million pound development including Heath Town Estate, phase one of the works is expected to take 3 months.



02

The Challenge

The new services that need to be installed in the high-rise residential blocks mostly travel through the communal areas (landings and corridors) and these spaces are very limited in terms of space and ceiling height. As the floor slabs need to have riser holes cut through them, the original structural design of the building is compromised as reinforcement is lost. Coupled with working in a live building and in very small spaces traditional strengthening measures would be even more problematic.



The Solution

CCUK's expert composite design team, working closely and in conjunction with the councils' structural engineering team designed an effective carbon fibre strengthening system to transfer forces and provide the stability required due to the cutting of existing reinforcement in the building.

The solution result is a very quick and effective carbon fibre wrap solution, designed to be installed around the cores prior to cutting, also the innovative use of the patented 'Tyfo Fibre Anchor System' for providing additional anchorage in such tight spaces.

Our team of fully trained installers have carried out the removal of existing floor screeds, temporary works, installation of the composite strengthening system and replacement of the screed. All safety measures have been kept within CCUK's remit to ensure the safest possible environment for the tenants still living in the buildings.



03

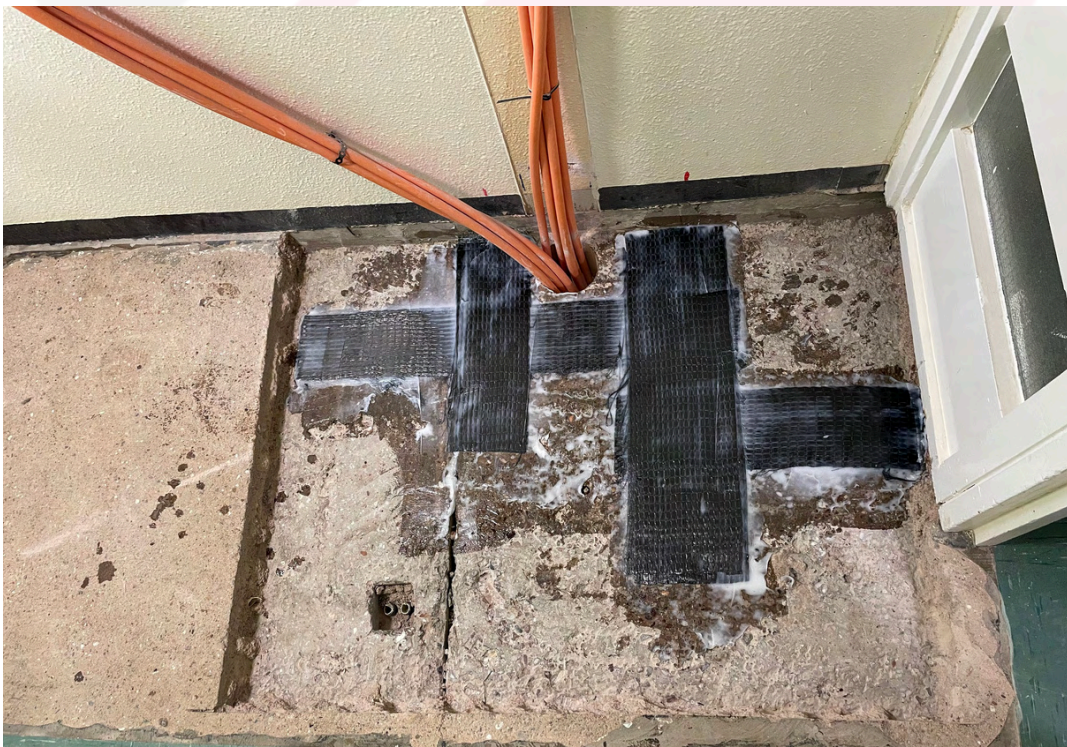
The Solution



The Results

Carbon fibre wrap systems are extremely strong, light and thin. Working in very tight spaces and with restricted head height meant that using these 1mm thick strengthening systems was the most innovative construction method possible. Within one particular building 22 storeys were strengthened in just 3 days, at a maximum 3mm thick overall no loss of coverage with the screeds and head height makes these systems perfect for such projects.

Tyfo fire protection systems have been used as a fire protection coating for the carbon fibre strengthening system on the soffits.



05

Why choose CCUK?

Working throughout the UK and the Humber region, CCUK provide design & build specialist construction services. We pride ourselves on being innovators in construction services and thrive by taking on the biggest of challenges. As certified installers for major material suppliers like **WEBER, SIKA, Fosroc and Fyfe** we are approved by the biggest and best in the business:

Established in 2010 we have built a reputation with our customers for a high quality of service and our innovative engineering solutions underpinned by our commitment to safety and sustainability. We are flexible and work collaboratively with our clients which has helped to secure a high percentage of repeat business across all industry sectors direct with clients as a specialist contractor.

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ISO
9001 : 2015
REGISTERED

ISO
14001 : 2015
REGISTERED

OHSAS
18001 : 2007
REGISTERED

