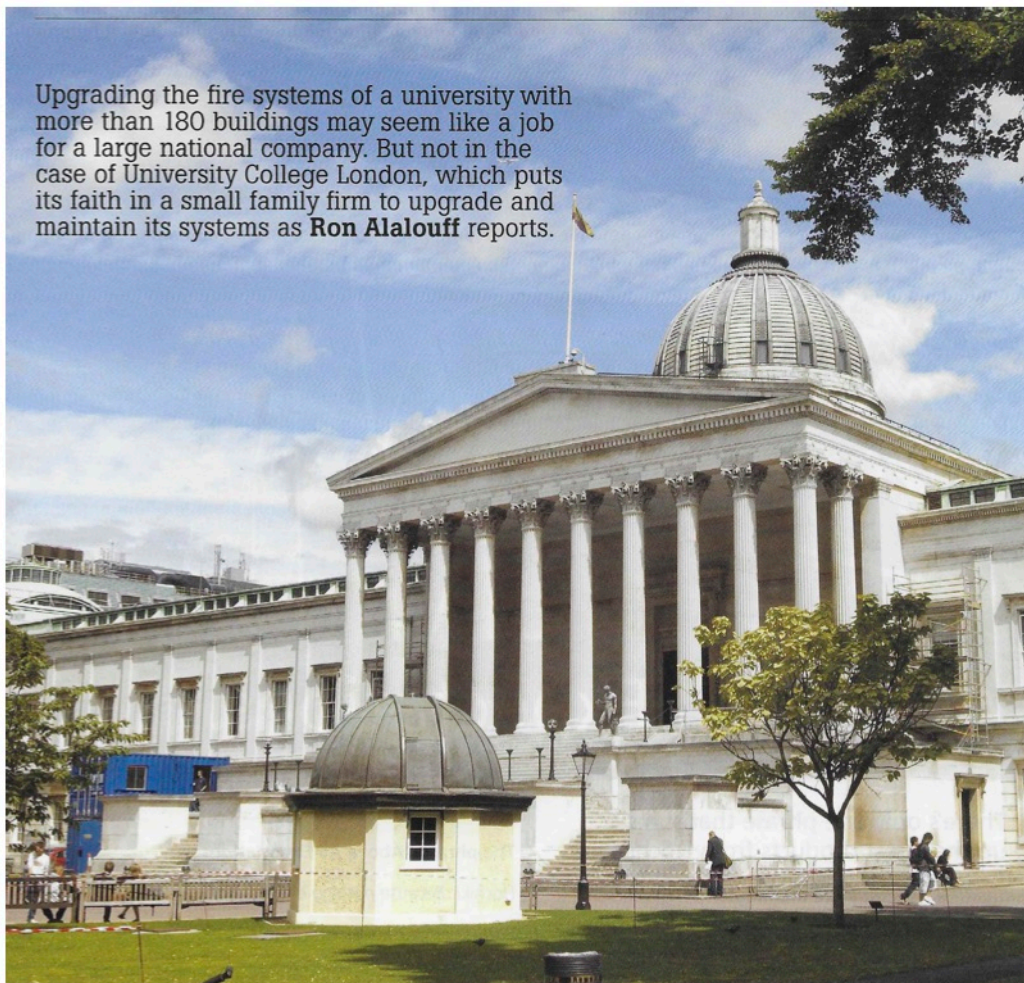


Upgrading the fire systems of a university with more than 180 buildings may seem like a job for a large national company. But not in the case of University College London, which puts its faith in a small family firm to upgrade and maintain its systems as **Ron Alalouff** reports.



LEARNING CURVE

UNIVERSITY COLLEGE LONDON is home to some 27,000 students and staff. And with students from more than 140 countries studying there, UCL can lay fair claim to being London's 'Global University'.

At its heart is the Wilkins Buildings in central London which, since 2005, has been undergoing a major refurbishment programme. As part of this, a comprehensive replacement and extension of fire detection and alarm systems was undertaken by installation and maintenance company, Fisk Fire Group. The installation at the Wilkins Building – which started in 2005 and was completed earlier this year – includes four 5-loop Morley-IAS ZX5e networked fire panels integrated with Apollo Discovery detectors.

The Morley-IAS addressable solution replaces a previous radio-based system and, says Fisk's senior estimator, Tel Fisk, "provides the level of flexibility, robustness and security essential in a major listed building, which includes a large refectory, UCL's administrative centre and main library."

Until the late 1990s, UCL worked with a number of different fire systems, protocols and service providers right across its premises in central London and beyond. The buildings range from halls of residence, laboratories and lecture theatres to libraries and museums. These ad hoc arrangements became increasingly difficult to manage as the university expanded, and as associated maintenance costs became increasingly high.

UCL then took the decision to rationalise its fire protection provision, both in terms of operational efficiencies and in a bid to ensure high levels of protection with fewer false alarms, by appointing a single provider. A long-term programme has been in progress in which Fisk Fire is replacing all existing fire safety equipment with Morley-IAS or Advanced Electronics panels and Apollo devices.

Flexible response

The first building to incorporate a Morley-IAS solution was the nearby Raynes Institute in 1998, housing the University's medical laboratories, followed by the Christopher Ingold Chemistry Building a year later.

As part of the rolling replacement

UNIVERSITY CASE STUDY

“These ad-hoc arrangements became increasingly difficult to manage as the university expanded, and as associated costs became increasingly high”

programme, implementation of the new fire safety system in the Wilkins Building started in spring 2006 and was completed, on schedule, in March of this year. The building's Grade 1 listed status has placed considerable constraints on installation work, which has had to be undertaken outside normal hours. In addition, the nature of the building as a centre for university events and functions – sometimes arranged at short notice – has also required a flexible approach from contractors.

Previously, because of its listed status and a requirement at the time by English Heritage, the Wilkins Building was fitted with a wireless detection and alarm system. But this time, English Heritage were persuaded that a wired system could be installed without damage to the fabric of the building. This had to be done with great care: all the cabling has had to be chased into the walls, for example, to preserve the original appearance of the building, while flush-mounted, stainless steel panels were also specified for aesthetic reasons.

“Installing fire safety equipment in listed buildings presents special difficulties,” explains Tel Fisk, senior estimator at Fisk Fire. “However, our extensive experience working with UCL and other clients over many years has enabled us to overcome any hurdles, without affecting the implementation schedule.”

All alarm signaling feeds back to the university's main control room which is staffed 24 hours a day. Apart from fire safety, security staff at the control room monitor every aspect of the university's 180-plus buildings, including security systems, building management systems, plant and machinery and personal alarms. Pre-alarm, fault and alarm conditions are displayed on graphic management software, so that they can respond to situations as quickly and appropriately as possible. The widespread use of CCTV around the university often allows staff to ‘see’ the causes of alarms, for example fire doors being left open. The pivotal role of the control room is clear, and staff have a high level of authorisation to order evacuations or closures if incidents occur.

Living in

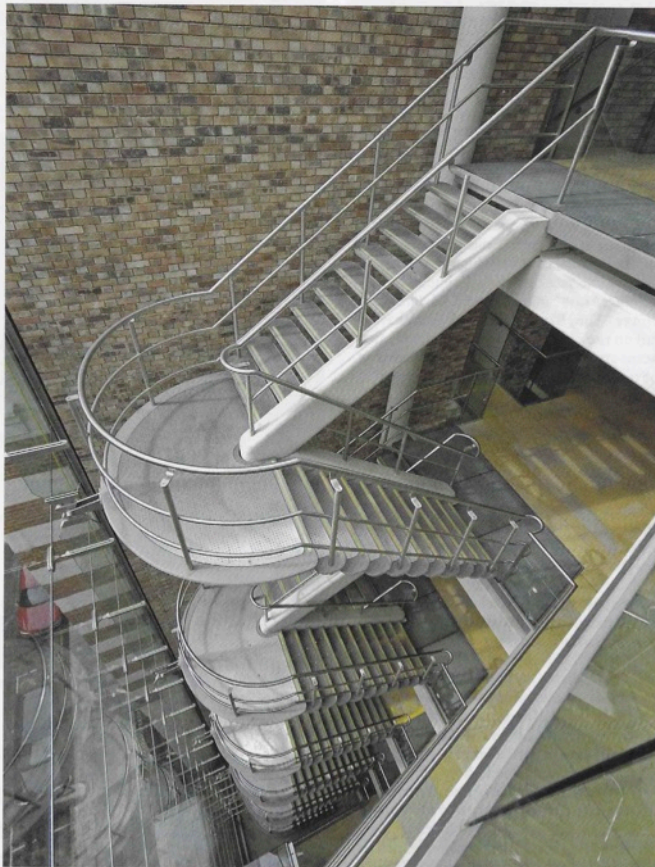
The university's halls of residence are also undergoing an upgrade. Like all student accommodation, false alarms are a big issue. In UCL's case, the London Fire Brigade was determined to reduce the number of false calls they received, as the legacy systems normally went into full alarm on activation of a single

device. So systems consisting of Apollo detectors and panels from Advanced Electronics are being installed, where a detector nearest the alarm source initially signals a pre-alarm mode. That detector then goes into heat mode and only when this, or another sensor, is activated will the panel go into full fire mode. After seven minutes of a single pre-alarm, the panel will automatically

clear and reset. Two very different residential buildings are being fitted with these systems: a modern tower block and a Grade 1 listed building.

Each hall of residence also has an appointed out-of-hours fire warden, usually a post-graduate student or member of staff. The larger halls have full workplace safety provisions, as they are staffed 24 hours a day.

As well as upgrade work, Fisk Fire has been busy installing and commissioning equipment in five new buildings on the ‘campus’. One of the most recently completed of these is a striking, contemporary new research building housing the Institute for Cancer Studies. Here, a 10-loop Morley-IAS panel and 240 sounders have been installed. A floor-to-roof central atrium is protected by beam detectors, with other areas covered by a combination of voice



The interior of the new, strikingly modern Institute for Cancer Studies where a 10-loop Morley IAS panel, 240 sounders and beam detectors in the atrium have been installed

UNIVERSITY CASE STUDY

PERFORMANCE CABLING FOR CUTTING-EDGE RESEARCH CENTRE

University College London's new Institute for Cancer Studies is using Prysmian's FP200 Gold fire performance cable to help ensure the safety of over 350 scientists it will house.

The £35 million research centre covers five floors, plus a basement and roof plant control rooms, and employs FP200 Gold cable to power the analogue addressable fire alarm systems. With the security and safety of the researchers and their work being paramount, Chelmsford-based contractor Fisk Fire Group had no doubts over which cable to use.

FP200 Gold was installed in cable tray and the smooth installation process was made easier with the application of Prysmian's AP7 cable clips. "From a practical point of view the cables look good once installed, providing a clean finish to complement the building's contemporary design," says Tel Fisk of Fisk Fire Group.

and conventional alarms. Three 5-loop networked panels have also been installed in the engineering department's 14-storey Roberts Building, also in the Bloomsbury area.

Fisk Fire came well recommended to UCL, as the firm was working on neighbouring sites belonging to University College Hospital. "Fisk had the hospital contract which involved some physical interface between adjoining buildings," says Simon Cooke, UCL Fire Officer. "They have a good work ethic, have staff on site or nearby, and being a family firm means you are dealing with a director most of the time." This comment comes from what must be a demanding client, as UCL has a dedicated fire safety department which publishes standards and protocols for all aspects of fire safety management, systems and maintenance, some of which go beyond British Standards or Building Regulations. For example, contractors are required to adjust detectors to 'rate of rise' detection during work, and then back to smoke detection on completion. These protocols are freely available at www.ucl.ac.uk/fire

The approach to such a large and longterm project means a great deal of teamwork between manufacturer, supplier and end user is needed. All parties have lines of communication to each other, rather than working along the traditional chain of supply.

"We selected Fisk because of its strong track record working with public sector organisations - in particular in health and education," explains Bob Osborn, chief engineer at UCL. "From day one, the company has provided a highly responsive and proactive service. In addition, Morley-IAS's flexible, multi-protocol control panels have helped us overcome problems with existing legacy equipment which have arisen during the replacement period." ■



The inside of the landmark Wilkins Building has a beam detection system, which was carefully installed to avoid damaging the fabric of the building

"Our extensive experience working with UCL and other clients over many years has enabled us to overcome any hurdles, without affecting the implementation schedule."