Eton College chooses most up to date fire detection technology...

...to protect ancient buildings

As one of the UK's oldest and most famous seats of learning, Eton College blends tradition with education of the highest quality. It is currently undergoing a full refurbishment of its oldest boarding house and original school room and wireless fire detection technology from Notifier by Honeywell has been installed while work takes place.

Founded in 1440 by King Henry VI, Eton College's original title was the rather more verbose Kynge's College of Our Ladye of Eton Besyde Windesore. Its aim was to provide free education to 70 poor boys who would then go on to study at King's College, Cambridge, which was founded in 1441.

NOTIFIER®
by Honeywell

History lesson

In 1461 Edward IV deposed Henry VI and construction of the chapel at Eton College, originally intended to be slightly over twice its current length, was stopped. However, by this time the chapel in its current form and the lower storeys of the current cloisters, including College Hall, had been completed. With reduced funds, little further building took place until around 1517 when Provost Roger Lupton built the tower that now bears his name together with the range of buildings, which now includes Election Hall and Election Chamber.

Numbers continued to grow, and by 1891 there were over 1,000 boys in the school, a figure which grew pretty steadily until the 1970s, by which time the school had reached its present size of around 1,300 boys. Since 2002, all pupils have to win their places through the current procedure of an interview, reasoning test and reference from their previous school. Most boys are resident in the UK and the vast majority arrive at age 13 and remain in the school for five years. Financial assistance is available, with 20 per cent receiving support through scholarships and bursaries.

Bricks and mortar

Eton College currently spends in excess of £11m per year on the upkeep of its heritage buildings alone. The main accommodation and teaching block – Lupton's Range, with Lupton's Tower in the centre – is currently undergoing refurbishment and while this is completed health and safety remains a top priority for pupils, teachers and the on-site workforce alike.

Building & Facilities Manager, Paul Bayley says: 'Eton College comprises buildings that are now many hundreds of years old, so ensuring that they meet modern standards is quite a challenge. We need to ensure that while these activities are taking place we have adequate life safety provision, so prior to commencing work on phase one of the project I called in our preferred fire detection systems contractor, Terry Eames Fire and Security (TEFS), to find out what we could do to meet our objectives.'

> ## "Eton College comprises buildings that are now many hundreds of years old, so ensuring that they meet modern standards is quite a challenge."
>
> - Paul Bayley, building & facilities manager, Eton College

Maidenhead based TEFS first worked at Eton College three years ago and has been supplying, installing and maintaining fire systems across the campus ever since. Philip Hall, the company's managing director, takes up the story and says, 'We were originally called in to carry out some work as a one off project in early 2015 and later that year we were awarded the entire fire detection maintenance contract. With over 80 years of combined experience in the field, our staff are highly skilled and we pride ourselves upon our service and professionalism. Having been a Notifier partner for a number of years, all engineers at TEFS are factory trained to ensure their competence in the design, installation and servicing of Notifier fire systems.'

Hall adds, 'Due to the thick stone wall construction of the buildings at Eton College, as well as their heritage status, this was going to be a challenging and interesting project to work on – one that would require an innovative solution. We knew that Notifier's reliable, robust and cutting edge technology would meet the requirements and I recommended the installation of its recently launched Agile wireless fire detection system.'

Something in the air

Thanks to its superior levels of communication reliability and installation flexibility, Agile is ideally suited to heritage sites, museums or complex
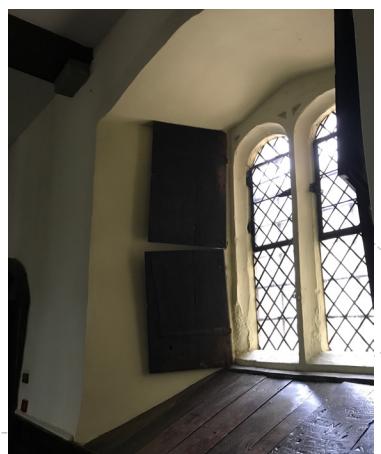
applications with aesthetic challenges or otherwise limiting restrictions. In addition, it can be used in buildings undergoing refurbishment, such as Eton College, or where temporary fire protection is needed such as construction sites, exhibition booths and portable classrooms.

The Agile platform is built on a powerful, patented mesh technology, with multiple communication paths to minimise interference and maximise system robustness. Asked to explain how this works in more detail, Michael Hobbs, business manager - South West and South Wales at Notifier, replies, 'Multiple connection paths between each transmitter and receiver allow continuous, bidirectional communication. If a connection path is broken, the mesh network automatically re-routes the signal, providing a secure and uninterrupted network. Each device acts as an independent router, allowing for multiple communication paths and the Agile system is designed so that if one link is broken, all of the devices continue to communicate with each other without any loss of coverage.'

The EN54-25 standard for wireless fire detection requires that communication paths are not susceptible to interference from either inherent or external sources. Hobbs comments, 'Wireless systems must conform to the EN54-25 standard in three specific areas – site attenuation, alarm signal integrity and interference immunity. Agile's multichannel frequency diversity ensures that this requirement is met, providing maximum levels of fire protection. Furthermore, the ability to switch between as many as 18 radio channels and two antennas per device along with an extended communication range provides greater tolerance to interference, improving overall system robustness.'

Panel decision

The Agile system at Eton College is being used as a system extension that is fully networked with the Notifier hardwired fire detection systems in all of the other buildings. This allows it to work seamlessly across the entire site, with information then fed back to a four loop Notifier ID3000 control panel located in the main building.

"I have been thoroughly impressed with the efficient operation of the Notifier Agile system and the technical know how of TEFS"

- Paul Bayley, building & facilities manager, Eton College

Michael Hobbs states, 'ID3000 perfectly complements the Agile system at Eton College, as it sets new standards in areas such as functionality, flexibility, user friendliness and reliability. Each loop can support up to 198 devices, with a total of up to 256 zones per panel, and its modular design offers a technically sophisticated range of facilities and functions, whilst remaining easy to install, program and operate. Furthermore, devices can be programmed to compensate for the differences in the use of areas where detection devices are utilised, while the ID3000's large EN 54 compliant LCD screen provides easy to read messages, giving designated personnel a consistent interface for all monitored equipment.'

Top grade

Eton College's Paul Bayley concludes: 'I have been thoroughly impressed with the efficient operation of the Notifier Agile system and the technical know how of TEFS - the combination of which gives me peace of mind that everyone on-site has the best possible protection.'

NOTIFIER®
by Honeywell