british security industry association

A guide to intruder alarms in the education sector

The purpose of an intruder alarm

The key purpose of an intruder alarm system is to monitor and detect unauthorised entry to a premises, consequently alerting the police or other response services as first responders and/or authorised people (such as a caretaker, headmaster, key holding services) to attend the property as part of a response plan.

An intruder alarm can often incorporate a panic alarm (PA) facility. A panic alarm, which is sometimes referred to as a hold up alarm (HA/HUA), is an electronic device designed to assist in alerting somebody in emergency situations where there is a real threat to a person or property. This could mean alerting the police, local security guards or another response service. A panic alarm is usually controlled by a PA button or a wireless 'radio PA'.

Intruder alarms are often remotely monitored and linked to an Alarm Receiving Centre (ARC), where trained operators can assess the situation and respond accordingly. This gives peace of mind that the educational facility is being closely monitored outside of hours and if an incident should occur, it will be dealt with.

Assessing the risks

In a survey of members of the British Security Industry Association's (BSIA) Security Systems Section conducted in early 2017, 50% of respondents felt that the use of private security measures in the education sector had increased over the previous 12 months; however, a further 67% believed that these measures would further increase over the following 12 months. The education sector faces a number of risks year round, with both people and possessions needing to be adequately protected inside and outside of school hours. The average educational establishment has a transient population, containing high value goods such as IT equipment, personal possessions of staff and students and a vast amount of personal and financial data. If any of these goods were to fall into the wrong hands, it could be extremely detrimental to the education establishment in general, making it imperative that both people and possessions are protected around the clock. Adding to this, schools also face the threat of vandalism, arson attack and trespassers. As staff and student welfare is always a top priority, ensuring that good quality security systems are in place can help protect from both external and internal threats.

Outside of school hours, intruder alarms can help protect the entire property. During school hours, intruder alarms can also be used to protect particular areas of a school. For example, in some educational establishments certain areas of the school will need to be restricted by an access control system, such as a stock room containing hazardous science equipment or an office containing student or staff files. By integrating an intruder alarm with an access control system, if someone is trying to forcefully enter a restricted area, the access control system can prevent access whilst sounding an intruder alarm to alert school officials to the area. Intruder alarms can also be beneficially integrated with other security systems, such as CCTV. An intruder alarm can be integrated with a CCTV system so that the intruder alarm acts as a detector to activate the CCTV system when an intrusion occurs. Images from the cameras can then be sent to a Remote Video Response Centre (RVRC) so that operators are able to see exactly where the intrusion has occurred and what has caused it.

In order to determine which systems will be most effective, it is important to undertake a risk assessment of the property. The risk assessment must address the specific security risks that are present or foreseen, as this will have a direct impact on the ability of the installed security system to function effectively.

Getting a Police Response

In order for a police response to be issued when an alarm is raised, the monitored intruder alarm must meet with the specific requirements set out by the National Police Chiefs' Council (NPCC). In Scotland, requirements are specified by the Association of Chief Police Officers in Scotland (ACPOS). Such requirements include:

- The installation of the alarm and the services provided by the installing company shall be certified by a United Kingdom Accreditation Service (UKAS) accredited certification body.
- In the case of systems that send signals to an ARC for monitoring, the ARC must comply with either British Standard BS 5979 (cat II) or BS EN 50518. Systems that comply with the standard will be issued a Unique Reference Number (URN).
- Intruder alarm systems issued with a URN will receive a level 1 priority police response until three false calls (four in the case of Scotland) have been received in a rolling 12 month period.
- A copy of the NPCC Guidelines for England Wales and Northern Ireland can be found here: **www.securedbydesign.com/wp-content/uploads/2015/08/Security_Systems_Policy_2015.pdf**
- A copy of the ACPOS guidelines for Scotland can be found here: **www.uksecurityltd.com/documents/acpos2002.pdf**

Essential technical standards to be aware of

As well as meeting with the police's guidelines for security systems, there are many other standards that intruder alarm systems and their installers must meet with in order to ensure that you are choosing a good quality product and service.

Personnel – Any security personnel should be vetted to **BS 7858** the *Code of Practice for Security Screening of Individuals Employed in a Security Environment.* This code sets the standard for the security screening of staff in an environment where the safety of people, goods or property is essential. Therefore, when choosing someone to install an intruder alarm system, it is paramount that they meet with BS 7858.

Installers and/or maintainers of intruder alarms – The installation and maintenance of intruder and hold-up alarm systems should meet with the PD 6662 scheme, which enables intruder and Hold Up Alarm systems to be installed and maintained in accordance with published British and European Standards. The following essential standards make up this scheme:

- BS 8243:2010 Installation and configuration of intruder and hold-up alarm systems designed to generate confirmed alarm conditions – Code of Practice

- BS 8473:2006+A1:2008 Intruder and hold-up alarm systems – Management of false alarms – Code of practice
- BS EN 50131-1:2006+A1:2009 Alarm systems – Intrusion and hold-up systems – Part 1: System requirements
- BS EN 50131-8:2009 Alarm systems – Intrusion and hold-up systems – Part 8: Security fog device/ systems
- BS EN 50136-1-1:1998+A2:2008 Alarm systems – Alarm transmission systems and equipment – Part 1-1: General requirements for alarm transmission systems
- DD 263:2010 Intruder and hold-up alarm systems – Commissioning, maintenance and remote support – Code of practice

CCTV Systems integrated with intruder alarms:

- BS 8418 Installation and remote monitoring of detector-activated CCTV systems – Code of practice
- BS EN 62676-4:2015 Video surveillance systems for use in security applications

Standards for Alarm Receiving Centres
- BS 5979:2007 Remote centres receiving signals from fire and security systems. Code of practice or;
- BS 8591:2014 Remote centres receiving signals from alarm systems. Code of practice
  - BS EN 50518-1:2013 Location and construction requirements
  - BS EN 50518-2:2013 Technical requirements
  - BS EN 50518-3:2013 Procedures and requirements for operation

The added benefits of a properly installed, maintained and monitored intruder alarm

A good quality intruder alarm that meets with all of the standards mentioned has many added value benefits. It not only helps to protect valuable and important assets, but can deter criminal activity as well. An alarm system can also assist in controlling access to the premises, whilst keeping control of any restricted or less frequented areas. Monitored remotely 24 hours a day, these alarms can provide early notification of an intrusion or potential fault, providing a quick emergency response time where necessary. Having a high quality system in place can also result in lower insurance premiums, helping to reduce costs whilst giving you the vital peace of mind that the premises is being properly monitored around the clock.

Checklist for choosing an intruder alarm

- ✓ Is the installer a member of a trusted trade association like the BSIA?
- ✓ Are the installer's employees security screened in accordance with BS 7858?
- ✓ Does the installer/maintainer comply with the essential standards covered by PD 6662?
- ✓ If integrated with CCTV, does the CCTV system comply with BS 8418 and BS EN 62676-4:2015?
- ✓ If monitored by an ARC, does the ARC comply with BS 5979:2007 and BS 8591:2014?
- ✓ Has the installer and ARC been certified by a UKAS accredited certification body?

Best practice examples
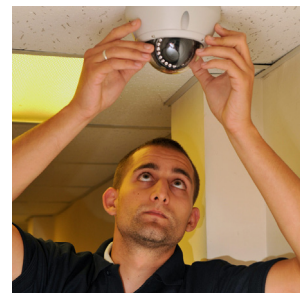## Chubb Fire & Security – Bury College

Project Overview

Bury College is a further education college in Greater Manchester that offers A-level courses, vocational qualifications and apprenticeships in a wide variety of subjects, including accounting, catering and hospitality, childcare, performing arts and sport. As part of a £40 million investment in its campus on Market Street, they opened two new buildings: a £7 million new facility at the Woodbury Centre, and a new Construction Skills centre.

Customer Needs

- The specification and installation of a reliable security system to protect each of the new buildings on the campus.
- The successful integration of all new equipment with existing security systems already in place across the college from a trusted supplier.

Solution & Benefits

Chubb equipped both buildings with sophisticated CCTV and intruder alarm technology in order to maintain the high levels of safety and security already in place throughout the college campus facilities. Chubb CCTV systems provide an effective crime deterrent, utilising the latest digital technology to monitor access, theft or other criminal activity. Chubb's intruder detectors and sensors are designed to detect when someone is attempting to enter, or is within, the perimeter of a protected area. Chubb can provide a range of hard-wired and wireless protection devices to suit almost any environment, utilising infra-red, microwave, vibration and sound sensing technologies.

Project Summary

Bury College has worked with Chubb and its sister businesses for nearly 30 years, and the customer confirmed that one of the chief advantages of the relationship is that Chubb can offer a one-stop shop for all of its security system needs. The college describes Chubb's products and customer service as being of a very high standard and says that overall the relationship is excellent.

Chubb Fire & Security – Wakefield College

Overview

Wakefield College has provided education and training for almost 150 years and today offers teaching to 3,000 full-time and a further 10,000 part-time students. Following the opening of its state-of-the-art new development in Glasshoughton – the skillsXchange campus, which houses facilities for students of Hair and Beauty Therapy, IT, Construction, Motor Vehicle and Engineering – it required both a security and a fire safety system in order to protect staff, students and property.

Customer Needs

- A fully integrated security system, which is vandal-resistant and works with the site's existing IT infrastructure.
- A fully addressable fire alarm system that quickly detects the first signs of a fire, alerting key people of its exact location.
- Trusted partner who could design and install the systems, which has engineers who are familiar with IT networks.

Solution & Benefits

Chubb installed an integrated security system that includes CCTV, access control and intruder detection technology and is interfaced with the Local Area Network of the campus, substantially reducing the capital cost and minimising the disruption that may have resulted from a standard installation. The sophisticated installation comprises more than 80 cameras, a mixture of both fully functional Pan Tilt Zoom and static domes, all housed in vandal resistant material. Images from each of the cameras are stored digitally and can be retrieved easily for future use.

The access control system has readers at 124 doors allowing it to monitor the movement of students and staff around the campus. In addition, Chubb worked with M&E Consultants Stephen Hunt Associates to design a fully addressable fire alarm system that sends text alerts to designated mobiles, such as that of the building manager, informing the mobile holder of the exact location of a fire in the event of an alarm. Repeater panels on each floor allow the alarm to be re-set and the sounders silenced from any part of the building. A series of optical detectors were also installed around the campus that detect the first sign of a fire by regularly sampling particles of air for impurities caused by smoke. This High Sensitivity Smoke Detection (HSSD) Technology provides the earliest warning to give students and staff time to escape. There are also manual call points. Furthermore, the skillsXchange's IT facility was specifically installed with an FM200 fire suppression system. FM200 is a non-ozone depleting liquefiable clean gas that is as effective as Halon.

Summary

Chubb's expertise in delivering major projects was a key factor in its appointment. Chubb's design team includes Microsoft and Cisco-qualified software and network engineers, who ensured that the integration of the security system into the existing TCP/IP LAN infrastructure was correctly designed and implemented.

Classic Security Solutions Ltd – An integrated solution

A school had recently installed a CCTV system without fully understanding its multiple benefits. On a recent meeting with the Business Manager at the school, she explained just how invaluable the system had become, particularly in terms of the impact it was having on combating bullies. The CCTV had allowed them to understand the issues within the school and identify the people involved in order to act accordingly. In another incident, they also found a homeless person on the 3rd floor going through the desk of one of the offices; as the school had access control, they were confused as to how the intruder had gained access. After reviewing the CCTV they found that the intruder had tailgated the cleaner through the control points. As a result, the school conducted security awareness training to all staff and operatives.

Becoming forward thinking, the school are now looking into a lock down system, which is becoming increasingly more popular in the education sector. Classic Security Solutions has developed a solution that installs a full warning system that will alert the complete school if an attack is in progress. By interfacing the schools intruder alarm and fire alarm with a panic button or strategically located buttons, the intruder alarm receives the trigger and the interface allows it to utilize the fire alarms bell circuit to send out a pulsating tone. The sound of the tone will then signal to staff to commence an emergency response plan, such as locking classroom doors and pulling down blinds. The system provides a cost effective solution, giving vital peace of mind to staff, students and parents.

Further information

For more information on the work of the BSIA's Security Systems Section and guidance on standards, visit **www.bsia.co.uk/sections/security-systems**

To find a security systems installer in your area, visit **www.bsia.co.uk/find-a-security-company**

Form No. 331