Securing schools:
Scalable integrated alarm systems for educational environments

HKC

Introduction

Educational institutions face increasing security challenges that require proactive measures to ensure the safety of students, staff, and assets. Schools, colleges, and universities must address threats ranging from vandalism and theft to more severe emergencies, such as hostile intruder incidents.

Schools in particular are at great risk, with research[1] revealing that four in five schools (79%) experienced crime during a 12-month period, an increase of 15% on the previous year.

The study also found 35% of schools suffered anti-social behaviour, 31% were defaced by graffiti, and 28% suffered trespassing. Plus, on average, crime costs a school more than £26,000 annually.

Securing educational environments can be a complex task, with many factors to consider. This whitepaper explores the challenges of school security specification, the importance of comprehensive intruder alarm solutions, and the benefits of adopting modern, integrated systems.

[1] Research commissioned by education insurer Ecclesiastical - www.ecclesiastical.com/insights/school-holiday-crime/schools-growing-target/

Security challenges in the education sector

Educational institutions such as schools, nurseries, colleges and universities face a range of unique security concerns that must be addressed by installing effective solutions. These include:

Unauthorised access:
Schools often have multiple entry and exit points, making it challenging to prevent unauthorised individuals from gaining access to the premises. Without proper security measures, intruders can easily enter buildings, posing a threat to students and staff.

Vandalism and property damage:
Acts of vandalism, including graffiti, broken windows, and damaged infrastructure, result in costly repairs and create an unwelcoming environment for students.

Theft and burglary:
Schools house valuable equipment, including computers, laboratory instruments, and audiovisual systems. These assets are often targeted by thieves, especially outside school hours.

Emergency situations:
Events such as hostile intruder incidents, fires, and medical emergencies require rapid response mechanisms to ensure the safety of everyone on-site.

Student and staff safety:
Schools must balance an open, welcoming environment with security measures that protect students and staff without causing unnecessary disruption to learning activities.

The importance of intruder alarms

When considering what elements to include within a school's security provision, facilities managers may combine systems to cover perimeter security and access control. Integrating an intruder alarm system into a school's security infrastructure is essential for several key reasons.

Firstly, intruder alarms enhance safety for students and staff. Schools are dynamic environments with constant movement of people. An intruder alarm system helps to deter unauthorised access and provides immediate alerts in case of a security breach.

This proactive measure ensures that swift action can be taken to secure classrooms, evacuation procedures can be initiated if necessary, and emergency services can be alerted promptly.

Alarms systems can also protect valuable assets and expensive equipment. They act as a deterrent to potential thieves, minimising the risk of property damage and financial loss. Plus, real-time alerts can reduce response times, increasing the likelihood of apprehending offenders before major losses occur.

Schools are sometimes targeted for vandalism too, particularly during holidays or after-hours. An effective intruder alarm system can significantly reduce these risks by alerting security personnel or the police before substantial damage occurs.

Educational institutions are also required to adhere to specific safety and security standards, including but not limited to BS EN 50131, BS 8243, PD 6662, and PD 6669. Installing an intruder alarm system can help schools meet these compliance requirements, ensuring a safer environment.

Ultimately, parents place put their trust in schools to maintain the safety and well-being of their children. By investing in a reliable intruder alarm system, schools can demonstrate their commitment to security, providing greater trust and confidence among parents and the wider community.

Guidance from the DfE

When considering which security systems to implement to address risks, facilities managers can seek advice from government bodies on best practise.

The Department for Education (DfE) offers site security guidance[2] on alarm systems, outlining that type 'A' monitored alarms are essential for school buildings, especially those that are remote from residential areas. Type 'A' alarms are monitored by a central monitoring station and have the facility for immediate response to any security breaches.

They also state it is essential to have clear facial recognition in order to identify an offender and for subsequent evidential use, so choosing an alarm system that can integrate with video surveillance is beneficial. The main areas for coverage of video surveillance are entrances, IT suites, offices, locations with little natural surveillance and circulation areas, both inside and out.

Fittings should be vandal-resistant and positioned out of reach, and lighting should support the operation of video surveillance, which should not be restricted by trees, shrubs or other landscaping features.

The DfE also recommends fitting a security fogging device that links to the alarm that conforms to BS EN 50131-8:2019. This would activate should entry be gained, meaning the room would fill with smoke, making it difficult for an intruder to see.

In the event of a hostile intruder attack, or if a security warning is received, the school may also need to go into a full lockdown mode. Selecting an alarm system that allows for school security lockdown can help protect staff and students.
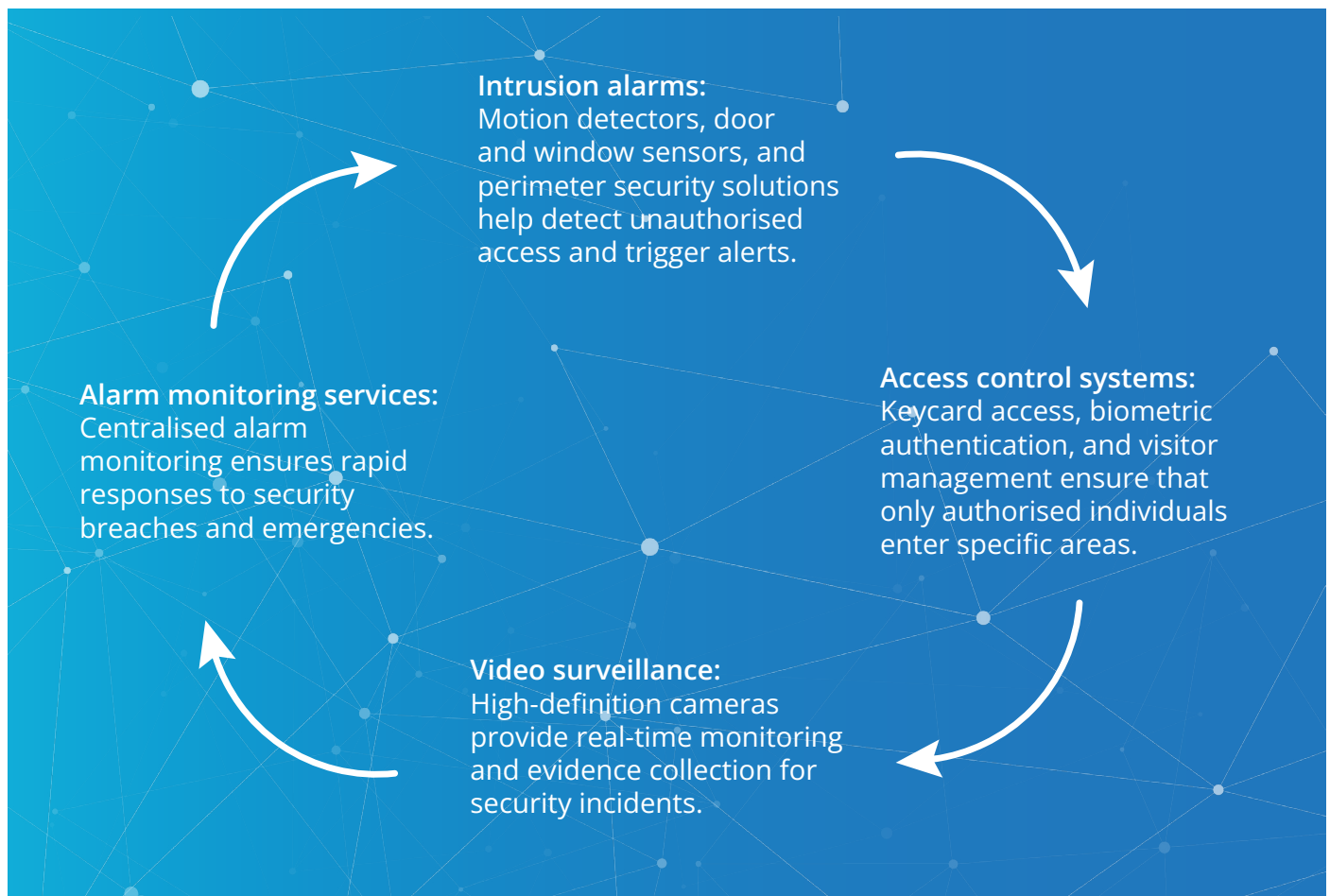
[2] www.gov.uk/government/publications/school-and-college-security/site-security-guidance

Connectivity and integrated systems

The latest alarm systems are smarter, more integrated, and more reliable than ever before, thanks to developments in technology. Modern systems now leverage broadband, 4G networks, and cloud platforms to deliver seamless and real-time communication between devices and users.

Intruder alarms are now able to integrate seamlessly with smart locks and access control systems, cameras and video surveillance, and other automation elements, offering a unified security solution. Modern security alarm solutions integrate various components to enhance safety and efficiency. A fully connected security system combines:

Intrusion alarms:
Motion detectors, door and window sensors, and perimeter security solutions help detect unauthorised access and trigger alerts.

Access control systems:
Keycard access, biometric authentication, and visitor management ensure that only authorised individuals enter specific areas.

Video surveillance:
High-definition cameras provide real-time monitoring and evidence collection for security incidents.

Alarm monitoring services:
Centralised alarm monitoring ensures rapid responses to security breaches and emergencies.

By integrating these elements into a single centralised alarm system, school facilities managers can monitor security events in real-time, receive immediate alerts, and coordinate responses more effectively.

Cloud-based solutions and remote monitoring

Cloud platforms enable centralised control, remote diagnostics, and firmware updates, enhancing system efficiency and reducing maintenance costs.

Real-time alerts, video verification, and instant notifications provide school facilities managers with enhanced security and greater peace of mind. Connectivity also ensures continuous system operation, even during network disruptions, offering resilience and reliability.

Plus, mobile apps and smart home integration empower facilities managers to monitor and manage security systems from anywhere, enhancing overall user experience for better convenience and control.

Where traditional security systems require on-site personnel to monitor alarms and surveillance footage, cloud-based solutions eliminate these limitations by providing:

- **Remote access:**
  Facilities managers and administrators can monitor school security from any location using a smartphone, or tablet.

- **Real-time notifications:**
  Cloud-based platforms send instant alerts in case of unauthorised access, system breaches, or emergencies.

- **Data storage and analysis:**
  Cloud systems store surveillance footage and security logs, making it easier to review past incidents and analyse security trends.

- **Remote updates and maintenance:**
  Cloud solutions ensure that security software can easily be kept up to date with the latest patches and enhancements.

Lockdown capabilities in emergencies

In the event of a security threat, the ability to initiate an immediate lockdown can be lifesaving. The ideal solution should incorporate the following:

Automated lockdown procedures:

With the press of a button, all doors can be locked to prevent unauthorised access and movement within the building.

Integration with alarm systems:

Security alarms and emergency notifications can be triggered simultaneously, alerting the police and emergency services

Predefined lockdown zones:

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Communication and alerts:

PA systems and mobile alerts ensure that students and staff receive real-time instructions on how to respond during a lockdown situation.

A well-implemented lockdown system enhances a school's ability to manage security threats efficiently and protect a school's occupants from harm.

Scalability and flexibility

Educational institutions range from small primary schools to large university campuses, each with unique security needs. Solutions should be designed to be scalable, ensuring that:

Small schools benefit from cost-effective solutions:

Wireless alarm systems and cloud-based monitoring can provide an affordable yet effective security solution.

Larger campuses can implement advanced security measures:

Multi-building campuses require interconnected security solutions, including multiple surveillance points, access control, and centralised alarm monitoring.

Future expansion is seamless:

Schools that plan to expand can integrate additional security components without overhauling their existing system.
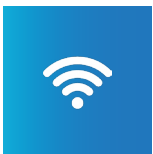
Wireless device benefits

Wireless security technology is revolutionising the way schools implement alarm and surveillance systems. Key benefits include:

Ease of installation:
Unlike wired systems, wireless security devices do not require extensive cabling, reducing installation time and costs.

Flexibility and mobility:
Wireless devices can be easily relocated or expanded as the school's security needs evolve.

Lower maintenance costs:
Fewer cables and infrastructure requirements mean reduced maintenance and repair expenses.

Reliability and redundancy:
Many wireless security devices are battery-operated with backup power options, ensuring continuous functionality even during power outages.

By adopting wireless security devices, educational institutions can install robust security measures with minimal disruption to their daily operations.

Asbestos risks in schools

Many older educational institutions, particularly those constructed before the 1980s, may contain asbestos in their infrastructure. Asbestos was commonly used in building materials such as ceiling tiles, insulation, and pipe coverings. Disturbing these materials during installation work poses a significant health risk, potentially releasing harmful asbestos fibres into the air.

In such environments, traditional wired security systems can present a challenge. Running cables through walls and ceilings may inadvertently disturb asbestos-containing materials, requiring extensive risk assessments, specialist contractors, and costly remediation procedures to ensure safety.

Wireless security solutions provide a safer and more efficient alternative. By eliminating the need for invasive cabling, wireless systems significantly reduce the risk of disturbing asbestos materials. This makes wireless security devices an ideal choice for older schools where asbestos may be present.

Wireless devices can be installed with minimal drilling or structural alterations, reducing the chance of asbestos disturbance. Without the need for complex cabling, installation is quicker, reducing downtime and disruption to learning environments. Wireless systems can be easily expanded or repositioned without invasive procedures, making them adaptable to evolving security needs.

HKC solutions

HKC offers a range of effective high security intruder alarm solutions to help meet the requirements faced by schools, nurseries and universities. Its range of fully flexible wired and wireless intruder alarm panels, detectors and communicators are robust, and reliable, boasting innovative technology and secure cloud-based connectivity.

Backed up by technical support, the versatile, adaptable range of products puts school facilities managers fully in control. With a wide and diverse range of detection devices and expandable control panels, systems are designed around a school's unique requirements.

Solutions can provide perimeter protection, with devices located on external doors and windows through contact or shock sensors which detect attempted or forced entry. They can also provide trap protection using devices internal to the building, such as dual technology motion detectors which use passive infrared and microwave technology to detect the presence of intruders.
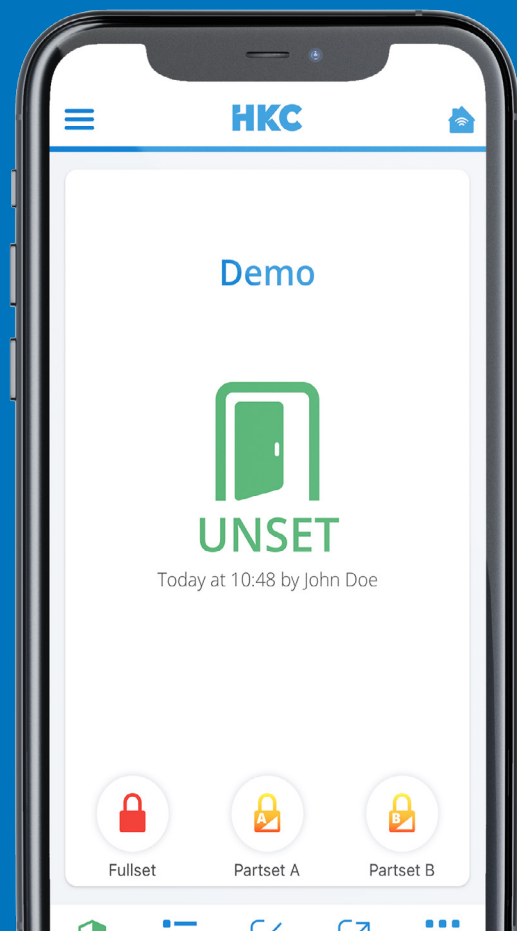
Systems and devices are connected to the **SecureComm** secure cloud infrastructure which be can accessed through the **HKC App** on any smartphone, providing complete remote control of the system.

Facilities managers can arm or disarm the system, monitor cameras, open gates or check the log to see the event history. Push notifications can also be enabled to give alerts of any activity on the system

The installer can manage the system on behalf of the school via the HKC Engineer App, allowing them to carry out remote maintenance and change device settings without the need to visit the premises. The SecureComm cloud also enables connection to 3rd party ARCs (Alarm Receiving Centres) offering additional monitoring.

HKC alarm systems also boast integrations with many other security products, including:
• Abloy UK access control systems
• UR FOG & Density fog detection systems
• Optex sensors

A Secure Lockdown Solution for a Busy School

Keeping students safe in a large school environment with multiple buildings can be a daunting task. When a secondary school with a sixth form needed a reliable lockdown system, they faced several challenges.

The challenges

- **Large, complex layout:** The school consisted of multiple buildings and floors, making traditional wired systems difficult and expensive to install.
- **Quick installation:** Minimising disruption to the school routine was crucial.
- **Robust and reliable:** The lockdown system needed to activate flawlessly in an emergency.
- **Audible alerts:** Loud and clear sounders were essential to ensure everyone could quickly identify a lockdown.

SleepTight Security, known for their high-quality service and competitive pricing, stepped up to the challenge. Their expertise and experience with HKC security systems led them to propose a solution that met all the school's requirements.

The solution

The heart of the system was the **HKC SW10270 panel**. Easy to use and reliable, this panel seamlessly integrated with wireless RF PA buttons strategically placed throughout the school. Upon activation, the buttons would trigger loud and clear RF ECHO, alerting everyone to a lockdown. Additionally, external RF-SABB sounders were incorporated to ensure complete coverage of the school grounds.

"Our site survey confirmed that the HKC solution would provide the coverage and reliability needed to ensure the system functions flawlessly in any situation."

Wireless technology benefits

The secret weapon in this solution was **HKC's SecureWave wireless technology**. This technology allowed for:

- **Faster installation:** No need for extensive cabling, minimising disruption to the school environment.
- **Uncompromising coverage:** Wireless expanders strategically placed around the school ensured robust signal strength throughout, even in large areas and across buildings.
- **Proven reliability:** SleepTight Security's experience with HKC's wireless range guaranteed the system's performance and reliability.

The result

With SleepTight Security's expertise and HKC's innovative technology, the school now has a robust and reliable lockdown system that ensures the safety of students and staff. This case study showcases the importance of collaborative efforts between a skilled security installer and a trusted manufacturer to ensure peace of mind in an educational setting.

Tim Law, Managing Director at SleepTight Security, said: "We knew HKC's wireless technology was the perfect choice for this project. We've used it before, and it consistently delivers impressive range and performance. Our site survey confirmed that the HKC solution would provide the coverage and reliability needed to ensure the system functions flawlessly in any situation."

SleepTight Security is a leading security systems specialist in the South of England. They pride themselves on exceptional service, competitive pricing, and a strong reputation built on trust and reliability. They offer a comprehensive range of services including installation, maintenance, and fault-finding for electronic security, CCTV, fire alarms, access control, and more.

Conclusion

Educational institutions must prioritise security to create a safe learning environment. HKC Security's comprehensive alarm solutions provide integrated, scalable, and technologically advanced security measures to address the unique challenges faced by schools.

By adopting modern security alarm solutions, facilities managers can enhance protection, streamline emergency responses, and ensure long-term safety for students and staff.

HKC

About HKC

Established in 1990, HKC is a trusted brand in both Ireland and the UK, renowned for manufacturing innovative electronic wired and wireless intruder alarm equipment.

HKC understands that security needs are unique. It offers a vast array of detection devices and expandable control panels that can be combined to design a system that perfectly aligns with the specific requirements of your school, ensuring the highest level of protection.

HKC offers a complete range of feature rich, cloud-based detection systems featuring consistent programming, excellent technical support and access to the SecureComm cloud solution. Technical support is a key element of its business, with a Technical Support Team on hand to help with any queries

UK Contact
Portobello Works
School Street
Willenhall
WV13 3PW
Tel: **01706 373560**
e-mail: **ukinfo@hkc.ie**

Ireland contact
Parkway Business Centre
Ballymount
D24 WY49
Ireland
Tel: **+353-1-456 7007**
Fax: **+353-1-456 8332**
e-mail: **info@hkc.ie**