

PROTECTING OUR

Museums and art galleries are the conservators of our cultural heritage and the guardians of our artistic and historical treasures. Whether it's the great works that adorn the walls and spaces of our national galleries and museums or the millions more pieces that are spread throughout the tens of thousands of other museums and galleries around the world.

When it comes to these precious items, people often use phrases like "priceless" or "beyond value" to describe their financial worth and this is of course true, after all how do you value works of art that are unique achievements in human endeavour or historical artefacts that help us to better understand our ancestors? But the fact is that someone, somewhere will give that item a real-world value, and the value is what someone else is prepared to pay for it, or indeed

parts of it, like precious stones, metals or ivory.

Where there is a demand there will always be those willing to break the law and risk all to make a quick buck, if the reward is high enough.

In what is said to be the biggest art theft in world history in Boston 26 years ago, two thieves dressed as police bluffed their way into The Gardner Museum and stole masterpieces by Rembrandt, Vermeer, and Manet estimated to be worth \$500 million. The paintings have never been recovered.

Are they stashed in an attic somewhere, too hot to sell or are they hanging in the private collection of an unscrupulous art collector? Maybe we will never know.

In February 1994 two men broke into The National Gallery, Oslo, and stole its version of *The Scream*, leaving a note reading "Thanks for the poor security."

A soldier stands guard next to Tutankhamun's gold mask inside the Egyptian Museum, Cairo



ARTEFACTS

In 2004 another version of the painting was stolen in broad daylight when masked gunmen entered The Munch Museum in Oslo and stole it and Munch's Madonna.

In 2005 24 paintings were stolen from the Netherlands' Westfries Museum along with 70 silver pieces. Fortunately, some of the paintings recently turned up in the Ukraine and were safely recovered.

In 2008, three armed men broke into the Pinacoteca do Estado Museum in São Paulo with a crowbar and a carjack to force open one of the museum's steel doors and stole paintings by Picasso, Cavalcanti and Segall.

In 2010 five paintings, including a Picasso and a Matisse, together valued at about 100 million Euros were stolen from the Musée d'Art Moderne in Paris.

In 2012 seven works of art were stolen from the Kunsthal Museum in Rotterdam. These included works by Lucian Freud, Paul Gauguin, Henri Matisse, Claude Monet and Pablo Picasso. These are alleged to have been burned.

In 2015 a Rodin bronze bust worth 2 million Danish Kroner was stolen during opening hours from the Ny Carlsberg Glyptotek museum in Copenhagen by two men posing as tourists and again in 2015 three masked bandits burst into a museum after it had closed to the public and stole a collection of 17 rare paintings worth about 15 million Euros from a museum housed in the 14th-century Castelvecchio fortress in Verona, Italy, including masterpieces by Tintoretto, Rubens and Bellini.

And finally, last year the UK saw an organised crime gang commit a spate of robberies from museums around the UK including Cambridge, Durham, Norwich and Lewes. They specifically targeted oriental jade pieces and rhino horn primarily for the burgeoning market in China. The estimated value of the haul was in excess of £57 million.

I could go on, but what this catalogue of larceny makes clear is that art theft is big business. According to the FBI, the global business of art theft is said to be worth \$6-8 billion worldwide and is the third largest global criminal enterprise after drugs and guns.

According to the Art Loss Register, Britain is the most vulnerable place for art theft with 40 percent of thefts occurring there and then the US is next with 16 percent.

The difficulty of disposing of such well known and well documented items probably gives a degree of protection for paintings and some sculptures, but what the above list demonstrates is that this is certainly no guarantee, especially if the art is stolen to order.

The same cannot be said of items that are made of precious metals, stones, ivory or rhino horn. Thieves will not hesitate to melt down, grind down and destroy priceless artefacts if they can get a good price for their constituent parts.

The buying and selling of art and historical treasures is still largely unregulated and unreported to any central authority except for maybe for insurance or tax purposes

making it very attractive to criminal gangs.

Security for museums and galleries poses real problems for those charged with the responsibility. The first problem is that a museum and gallery's reason for being is that they are open to the public; which gives any would-be thief all the access they need to reconnoitre the premises or "case the joint" in the parlance of the criminal fraternity. This makes it easy for the criminals to count and assess staff, observe routines and establish what visible security equipment is employed and where.

Another problem is location. Museums and galleries are often in busy urban areas where it is easy to observe and approach without attracting too much attention and high levels of noise are a constant.

For the purposes of this article we are just looking at some of the building security or perimeter options, so let's start by defining the perimeter. For town and city museums and galleries the perimeter is not usually a fence with open spaces in between, but more often than not the walls of the building itself, because the building is set in the middle of the city or town, possibly sharing walls and roofs with buildings next door. So the perimeter is in effect the external walls of the building and you can add the roof, any adjoining walls with other buildings, the floor and, of course, the basement walls and floor. During the recent Hatton Garden robbery in London, thieves drilled through the basement wall over a weekend to get away with an estimated £14 million worth of diamonds, gold, jewellery and cash.

So when deciding what security systems are needed, the first thing to do is a thorough risk assessment which will identify the vulnerabilities and threats and balance those against the potential losses and available budget for security. Part of any threat assessment must include taking into account detailed plans not only of the building in question but if possible adjoining buildings and what's underground like sewer systems etc.

For example, in the recent UK thefts, the criminals used a variety of methods to gain access, including hiding in the building until after closing, forcing windows and shutters, as well as an angle grinder to cut a hole in a wall.

So CCTV surveillance covering all external walls and doors is, therefore, the first line of defence, being careful to identify and cover any potential blind spots, because if you don't identify them, professional criminals surely will. It may also be necessary to use infra-red or low-light cameras where light is an issue. Access via the roof can be secured by physical means like razor wire, but may also be covered with sensors and CCTV. CCTV also means that everyone entering the building either by the main entrances or by service doors can be recorded.

Access control is another key element and is fundamental to ensure that visitors and staff do not enter areas for which they are not authorised.

Integrating facial recognition and video analytics software systems into CCTV systems can also greatly



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enhance their capability and effectiveness.

Facial recognition can be used to compare visitors with watch lists (where available) or to identify and give out alerts when individuals make multiple visits over a given period.

Video analytic software is useful in picking up suspicious behaviours such as leaving bags or indeed individuals hiding. License plate recognition (LPR) software is another extremely useful tool for street-facing cameras, where they can pick up known vehicles or over-regular visitors and drive bys.

There is a range of sensors that can be employed including movement, heat sensors as well as infra-red and microwave, which have all greatly improved in effectiveness in recent years. Seismic sensors should be considered in places like basements if the Hatton Garden robbery is not to be repeated.

The main vulnerable points are the windows and doors. For windows and doors specialist security shutters are an ideal solution – such as those produced by UK company Charter Global Ltd, which manufactures the only SR4/ SR5-rated shutters made from lightweight aluminium.

For doors, Charter Global produces the Obexion range of shutters, which were the first security shutters to achieve an SR5 security rating in 2014 and again in 2016. They boast externally face fixing detail, which makes them ideal for all main entrances as well as secondary entrances and service doors. They have a unique keyless lockdown technology feature that means that the shutters lock in any stop position, closed or not. This means they cannot be forced open even if the criminal is able to get a crow bar or jack underneath the shutter, as in the São Paulo robbery. The shutters open from the inside or outside

requiring no external locking mechanism that can be tampered with. This means that they offer a secure first point of entry.

In addition to the requirement for security, museums and galleries have the need to be aesthetically pleasing to visitors and the building itself may well be of architectural and historical interest.

The reduced weight of the shutters means they can be retrofitted to historic buildings sometimes without the need for additional steelwork support structure all combined to create a low visual impact.

Obexion door shutters were recently installed into the Beacon Museum in Whitehaven UK, which required lifting and fitting the shutters on the top floor of the museum, which was made possible by their lightweight construction.

For window protection Charter Global produces the Integr8 SR Built in range, tested to security-rated levels SR2 and SR3.

Once again, these lightweight shutters can be discreetly incorporated into the building project without the need for additional structural steel supports.

Of course, there are many more systems that can be employed such as location-based tracking for staff and exhibits and augmented reality tools. But it must be noted that as more and more security systems become automated and IP based, it is equally important that cyber security be considered as part of any security review. After all, what use is a high-tech security system if it can be hacked and disabled?

And finally, as always the most important component of any security system is properly vetted, trained and motivated staff, without which all systems are ineffective.

An investigator searches the Rotterdam Kunsthall museum break-in in 2012

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