

# RiskFix

**Balanced Risk Engineering Solutions** 

## Security Metal Theft

### Understanding the Risk

Metal theft has been a common problem for many decades, but there has been a major increase in losses in recent times. This is due to a significant rise in new and scrap metal prices and has moved far beyond the 'traditional' scope of non-ferrous metal to include just about anything metallic.

Metals fall into two distinct types and this has traditionally had a bearing on theft attractiveness. The two major families of metal are ferrous and non-ferrous being defined as follows:

Ferrous: This is essentially metals formed of or containing iron.

Non-ferrous: These are metals that do not contain an appreciable amount of iron such as copper, brass and aluminium plus other more exotic alloys.

Historically, non-ferrous metals have always been subject to thefts and are considered a target risk from a security point of view. The price of scrap non-ferrous metal per tonne is significantly higher than that of ferrous.

Lead is a non-ferrous metal and over the decades churches in particular (but also many other structures) have been targeted for the lead used on their roofs.

The theft of non-ferrous metal is not just confined to roofs, and extends to include a wide variety of metals – aluminium, copper, nickel, steel, lead and copper piping, copper in telecoms networks and electrical sub stations, bronze plaques and statues, manhole covers are just a few examples of such thefts. In recent years, metals such as ductile iron and steel, have become a major target for thieves.

## **Related Loss Statistics**

Metal theft is a serious and growing national and international problem that causes significant damage to communities, businesses, and the UK's infrastructure, telecommunications, rail and power networks.

According to figures produced by the The National Police Chiefs Council (NPCC), there has been 38,081 metal thefts across the UK during the period 2013-2014.

## Managing the Risk

Physical protections provide the first line of defence against potential intruders and can be further enhanced



by electronic detection and surveillance. Good physical security will protect a building from both opportunist and premeditated attack.

Site perimeter fencing: perimeter fencing should be robust and secure, with access gates being of similar standard; for example, 2-metre high steel palisade or metal weld mesh fencing, with gates of similar construction secured by a padlock complying with BS EN 12320 (Grades 5-6). Masonry walls are also effective, but chain link and timber fencing provide only low level defences and should be regarded as a site demarcation rather than a security barrier.

- Effective overnight or movement-activated external lighting should be provided to act as a deterrent to criminals, and/or to provide adequate illumination for CCTV surveillance equipment.
- External boundaries should be monitored (where appropriate) by approved CCTV surveillance equipment, alarm movement sensors, infra-red beams, vibration monitoring detection, all of which should be inspected and maintained in good condition.

Building security: The physical construction and state of repair of the buildings are primary considerations when assessing the overall security. The strength of the building materials and the method of construction will often determine the level of additional protection required.

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The first line of protection for any building is the external openings, such as doors, windows and rooflights.

 Doors – external doors should be robust and fitted with good quality locks or padlocks, at least to BS 3621:2017 Lock assemblies operated by key from both the inside and outside of the door or BS EN 12320 (Grade 5-6). Vulnerable doors should be protected by external 1.6mm steel sheet, coach bolted through the door at 200mm centres; if a higher level of security is warranted, internal or external approved shutters need to be fitted in addition to further protect existing doors.

Note – Protection of designated fire doors must be agreed with the local Fire Authority prior to work being carried out.

 Windows – are a common source of entry by criminals, and premises are only as secure as their weakest point. Vulnerable windows should as a minimum be protected by key operated window locks; if a higher level of security is warranted, internal or external steel bars should be fitted (AIG RiskFix Security Physical Protections gives further advice on window security).

Security posts: are effective in protecting premises against ram-raids (where criminals use a motor vehicle to attack windows, doors, and the building fabric itself), and restricting vehicular access. Loss Prevention Certification Board (LPCB) approved fixed or telescopic bollards may be installed as appropriate.

Internal security stores: should be constructed to house high value and/or attractive metals. Such stores (including the roof) should be of substantial construction, or formed from steel welded mesh on a steel frame; door openings should be secured by a padlock complying with BS EN 12320 (Grades 5-6).

Electronic detection: physical protections form the vital basis of premises security. However, given sufficient time determined criminals can overcome most physical defences.

An intruder alarm is designed to support robust physical security by quickly detecting intruders on the premises, and then by alerting an approved alarm receiving centre (ARC) to enable them to make an appropriate response.

It is essential that the intruder alarm system is reliable, and resilient against attack or interference; the correct design, installation, maintenance and operation of the system are therefore vital. The intruder alarm should be set whenever the premises are unoccupied – (AIG RiskFix Security Intruder Alarms gives further advice on electronic security).

CCTV: can be an effective and flexible part of an integrated security system, providing support to physical protections and intruder alarm systems. It should be connected by live transmission equipment to either an on-site security control room or a remote centre to be a pro-active and responsive element of the integrated security package – (AIG RiskFix Security CCTV gives further advice on CCTV systems).

Manned guarding: In some instances it may be appropriate to utilise manned guarding to provide an additional security presence.

An assessment should be undertaken to consider the type of manned guarding service required, i.e. static guards or mobile patrols; factors will include the size, nature and sensitivity of the risk and the adequacy of the existing protections.

Guards may be 'in house' personnel or contracted from a company accredited to the NSI. When choosing a guarding company, National Security Inspectorate (NSI) listing is a good indicator of full compliance with UK manned guard licensing rules and practice.

Security Industry Association (SIA) licences should be held for all appropriate security company staff. Some SIA compliant companies have joined the SIA noncompulsory Approved Contractor Scheme (ACS); however SIA licences are still required for individual security company staff.

Accreditation by the NSI for guarding operations indicates compliance with the above standards.

Additional measures: other actions that can be taken to reduce attraction include:

- reducing the level of metal stock held
- the provision of adequate security lighting
- the use of forensic marking dyes
- the use of non-drying forensic 'gels' or 'greases', as these transfer and stick to the thieves when metals are handled.

Metal that has been forensically marked can be identified as stolen if it subsequently turns up in a scrap metal dealers' yard and traced back to its original location. The person who has taken the metal will also have been marked, which will assist in identifying him or her as the perpetrator.

Many police forces in the UK have set up special operating units to target metal thieves and using the above methods can assist the police in recovery of stolen metal.

#### **References:**

National Security Inspectorate (NSI) is an independent approvals and inspection body for CCTV Systems. www.nsi.org.uk

Loss Prevention Certification Board (LPCB) is an independent testing and approvals body for fire and security products. www.bre.co.uk

Master Locksmiths Association (MLA) www.locksmiths.co.uk

## For further information please contact your local AIG Risk Engineer.

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