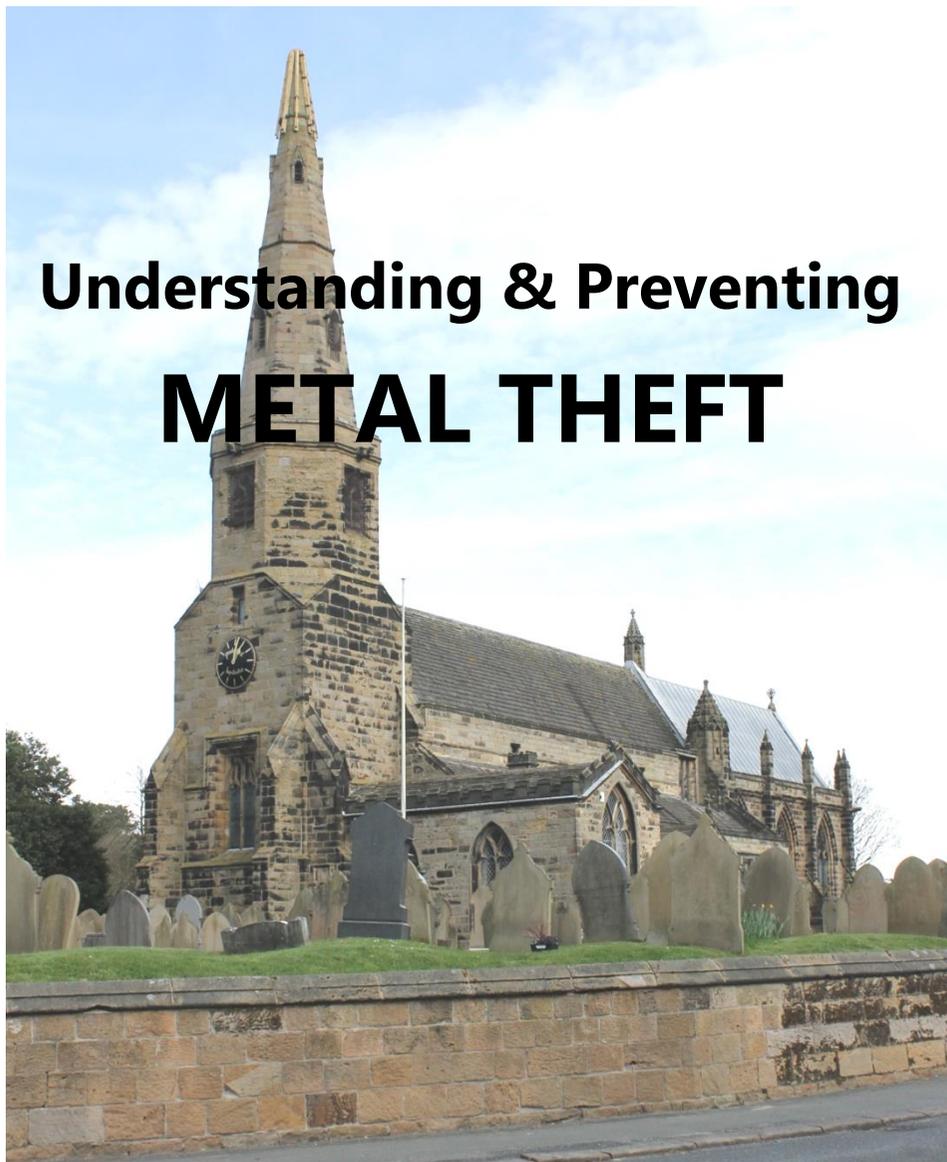


A Making it Easier Guide

For Churchwardens, Building Managers and PCC Members

Understanding & Preventing **METAL THEFT**



Updated September 2018



Diocese of
Liverpool

Introduction

This guide is part of a series which aims to make it easier for you to make sure that the fabric, fixtures and fittings in your church are kept in good working order.

The theft of metals – particularly lead, but also copper, brass and bronze – from churches is a serious and escalating problem. Metal theft can cause serious (and expensive) damage to buildings and their contents. This Guide contains information on:

- Which metals are vulnerable and why;
- The damage which can be caused by metal theft;
- How to protect your church against metal theft;
- What to do if your church suffers from metal theft;
- Where to find more detailed information and guidance.

This guide is not a statement of the law but is intended to give you good general guidance. We will notify you of any significant changes to the law or regulations on the website and via our diocesan weekly email bulletin. If you are unsure, have any questions or need further advice then do please contact the author of this booklet:

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Top Tips

Do

- engage as many people in the community as possible, educating them about metal theft and encouraging them to report suspicious activity.
- be vigilant – keep an eye open for signs your church has suffered an attempted or actual metal theft. Be aware of suspicious behaviour, vehicles or drones in the vicinity of your church and report these to the Police.
- use a range of strategies to deter and defeat the criminals.
- make sure your external metal is marked with a forensic marking solution and that this has been registered.
- keep all gates, etc., locked at night or when the church is not in use.

Do not

- assume your church is too high or too visible to be attractive to metal thieves. It isn't.
- leave ladders, bins or anything else near to the building for potential thieves to climb upon.
- carry out any work to protect or replace metal without first obtaining a Faculty (and Planning Permission if required) authorising it.
- fail to report to the Police, immediately, any incidence of metal theft – or attempted metal theft – at your church.

Metal Theft

To many people, the phrase “metal theft” might conjure up the image of a rogue, like the character played by Leonard Rossiter in “Steptoe And Son¹”, trying to scrape a living by hawking pieces of scrap lead flashing acquired in dubious circumstances.

The reality is that the theft of metals from buildings, railways and power distribution networks is a huge illegal industry, controlled by criminal gangs and costing the economy billions every year.

Controls introduced by the Government from 2013 led to a brief reduction in metal theft. Recently however we have seen a resurgence of this crime as metal prices rise. Criminals now have the infrastructure in place to get stolen metal out of the country and beyond the reach of British law enforcement agencies.

In August 2018 a Liverpool church suffered the theft of around 130 square metres of copper from its roof. The criminals behind this attack had clearly researched their target very carefully, only taking metal which was not visible from the ground. It is believed they may have used a drone to help plan the theft.

A variety of metals are at risk, and the criminals will go to great lengths – and take huge risks – to steal them. Even live high tension electrical cables are not immune to theft. Metal thieves think nothing of climbing 20m or higher to strip lead from a church roof. The fact is that booming world demand for metals, particularly in China, makes the trade in stolen metal an extremely lucrative one.

As far as churches are concerned the metals most likely to be targeted are lead (roofs / flashings) and copper (roofs / lightning conductors) .

¹ “The Lead Man Cometh”, episode first broadcast 21/1/1964



Most churches (the exceptions generally being more modern ones) will have some lead on the roof. The versatility of lead and the ease with which it can be formed into complex shapes mean that it can be used to cover an entire roof, line gutters, form architectural features or protect junctions between the roof and the stonework of the building. It is an extremely durable material and there are cases of lead roofs lasting two centuries or more. Some older churches also have cast lead hopper heads and downspouts.

The criminal interest in lead stems from it being an essential component of car batteries for which there is currently enormous demand in Asia. It is heart-breaking to think of our priceless Christian heritage being pillaged for such a purpose.

Copper is another metal which is targeted by the criminal fraternity as it is extensively used in electronics manufacturing; indeed, almost every electronic device contains some copper as it is an excellent conductor of electricity. It is currently being used faster than it can be mined and refined, meaning that it fetches a high price.

Copper is sometimes found on church roofs or spires – where oxidation gives it a characteristic green colour – and most lightning conductors are made of the metal. Copper pipes (particularly if they are outside the building) and wires may also be vulnerable.



It is despicable, but sadly true, that even war memorials have been targeted by metal thieves. Often the plaques commemorating the fallen fetch little more than £100 each as scrap metal; they may cost twenty times as much to replace but the financial cost is nothing compared to the distress caused by such an appalling act of vandalism.



Consequential Damage

“Consequential damage” is the term used by insurers to describe additional damage to the building caused by the removal of metal and by the thieves’ attempts to access and escape from the building in the process of committing the crime. It is possible that considerable damage may be caused even if the thieves do not succeed in removing metal. In the photograph below, the roof damage results from an attempt to steal the rolled lead ridge. The fact that this is over 15m up on a building by a busy road junction proves that metal thieves are ready to take deadly risks.



The damage caused by metal thieves may be extensive and cost several times more than the cost of replacing the stolen metal. In one case (not in the Liverpool Diocese) criminals stole a copper lightning conductor – scrap value maybe £100 – by attaching one end of the rope to the conductor and the other to their vehicle. They simply drove forward to pull the conductor down, an action which resulted in such severe masonry damage that part of the tower collapsed.

Lead theft from roofs can lead to consequential damage through water ingress – after all, the purpose of the lead being there was to keep water out of the building. Often this is immediately evident as the first rainfall after the theft results in water dripping in to the church. Unfortunately this is not always the case and prolonged undetected water ingress into a roof void can result in dry rot attacking the roof timbers causing catastrophic damage for which six-figure repair bills are not unheard of.

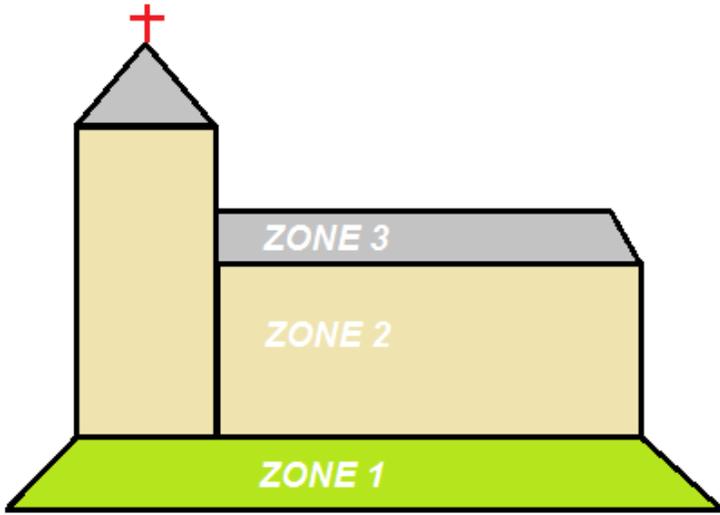


Metal thieves do not care about the damage they cause to historic buildings, or about the distress they cause to those who love and care for them. The Government does, however, recognise the problem and has designated Heritage Crime as a factor which can increase the sentences handed down to offenders.

It is, of course, better to prevent the problem than have to deal with its results, so let us turn our attention to developing a strategy for keeping the thieves at bay.

Preventing Metal Theft

The fight against metal theft may be visualised as taking place in three zones:



Zone 1 is the ground level where the focus is on people-based and generally low-cost and low-technology actions to educate, raise awareness and build relationships aimed at fighting metal theft.

Zone 2 is the area between the ground and the roof. Actions here are targeted at reducing the accessibility of the building to criminals and involve solutions of low-to-medium cost and technology.

Zone 3 is the roof itself. If the criminals succeed in making it this far, the final line of defence consists of high-technology (and therefore mostly relatively expensive) means of making it as difficult as possible for thieves to succeed, and of identifying them and linking them to the crime if they do.

Zone 1 – Ground Level

The key here is to engage with as many people as possible: building awareness of the problem of metal theft, encouraging vigilance (but NOT vigilante-ism!) and educating the community in the value of heritage buildings in general and that of your church in particular.

Encourage congregation members and local residents alike to watch out for suspicious activity around the church, particularly in the evening and at night, and report any such behaviour noted to the Police.

Maintenance contractors do not generally attend at night so workmen or vans in the vicinity of the church should be reported (genuine contractors attending a real out-of-hour emergency will not be offended by being challenged) and a free poster which can be laminated and placed on notice boards may be downloaded at <http://iansimpson.eu/LeadTheftPoster.pdf> (or scan the QR code *right*).

Note that it is illegal to fly an unmanned aerial vehicle (drone) with a camera within 50m of a building without permission. Be vigilant and challenge – or report – anyone you see doing so.

Even if they are not members of the church, most residents in any given community are unhappy to think of crime taking place in their midst and will be pleased to co-operate with any initiative to reduce it. If extra persuasion is needed, remind them that metal thieves do not just steal from churches: the next target might be the local school, library... or their homes. Cases of whole terraces of housing being stripped of their flashings overnight are on record.



If your church has a link with a local school, use it to educate the children about metal theft and the part they can play in reducing it now and in the future.

Create local networks, linking with other churches (synagogues, mosques, temples...) and nearby public buildings to share expertise and intelligence.



A disused church in Liverpool. The lead has been almost completely stripped. Amazingly the lightning conductor is still in place... for now!

Police statistics show that buildings which are – or which appear to be – unused or unoccupied are at much greater risk of being targeted.

If your church looks closed or derelict then **NOW** is the time to make it look open, used and cared-for again! Clear any litter and weeds away, replace all out-of-date signs and attend to any minor repairs and paintwork touch-ups which may be required.

Besides theft prevention, it is crucial to your church's mission that it looks open and loved!

If your church has gates, make sure they are closed and locked at night so thieves cannot access the building. Remember that metal is heavy so the further they have to carry it to their vehicles the less attractive it becomes, not least because whilst they are carrying the metal they are at the highest risk of being caught.

Finally, if your church has already been targeted by metal thieves in the last twelve months, it is statistically at a much higher risk of being targeted again, probably by the same people.

As St. Peter tells us, quoting the Book of Proverbs, “a dog returns to its own vomit” (2 Peter 2, v.22). This may be because they couldn’t carry all the metal on their first visit or because they needed to return with additional tools to get it all; it may also be because stolen metal is often replaced without any additional security measures being put in place so the thieves can just go back and help themselves once more.

Zone 2 – Between the Ground and the Roof

The focus in this zone is on making it more difficult for would-be thieves to reach the valuable metal, the challenge being to balance making it obvious to the criminal that security measures are in place with the need to make the building as attractive and accessible as possible to genuine visitors.

The first obvious measure is to make sure that anything which criminals could use to climb up into or onto the building is moved away, out of their reach. Wheeled bins in particular should be locked in a shed or securely chained to railings away from the building as not only are these used by criminals to get a “leg up”, they are also used as wheelbarrows to transport ill-gotten gains off site.

It should go without saying that ALL ladders need to be locked away inside the building.

Remarkably, in the course of researching this leaflet, I discovered that one church which had had a “clear out” had left a redundant ladder outside, just waiting to be used by metal thieves (right).

DON'T DO IT!!! If metal theft takes place and it is found the church’s own negligence contributed to it, the insurance policy will be invalid.



Special precautions need to be taken if there is scaffolding in place for building works. You MUST advise your insurer if this is the case and follow their advice about additional security requirements.

Planting spiky shrubs or bushes can act as a deterrent to unauthorised access, but their siting needs to be chosen carefully in order to avoid reducing accessibility for maintenance work and for genuine building users. You also need to account for the likely size to which a shrub might eventually grow. Generally speaking, any major planting schemes will require a Faculty so you should approach the Diocesan Advisory Committee (DAC) for advice first.

“Vandal grease” or “anti-climb paint” (a type of paint which never completely dries) can be effective when applied to downspouts, etc., but never apply it below 2m (6’ 6”) above the ground. You must display prominent signs warning that it has been applied.



Fitting downward-facing spikes towards the tops of downspouts makes the task of climbing up far more difficult and so offers a highly visible deterrent. These are rather ugly devices, however, and you will need both Faculty and Planning Permission to fit them. Your Statement of Need will need to show clearly how the benefit offered by the spikes outweighs any harm done to the appearance of the building.

Razor wire and barbed tape are not, as is commonly believed, illegal in themselves but there are two major disadvantages to their use. Aesthetically they are awful, and they can cause serious injury to intruders. As the law currently stands a church could be held liable for such injuries and as such these materials cannot be recommended except in extreme circumstances. Speak to your insurer first if you are considering them!

Lightning conductors may be effectively protected by enclosing the bottom two metres or so within a close-fitting sheath of a cheaper metal.



This lightning conductor is fitted with a protective sheath.



This one wasn't.

Zone 3 – On the Roof

Security measures taken in Zone 3 are the most high-technology and expensive, and they should be regarded as the last line of defence after measures taken in the two lower zones.

One of the perceived attractions to the metal thief was the anonymity of the stolen metal – once stripped and taken off site it was very difficult to link it to the building from which it was stolen and therefore obtaining successful prosecutions against the criminals was nearly impossible. **SmartWater®** is a forensic marking solution containing a unique chemical “fingerprint” which – though invisible to the naked eye – can be detected using ultra-violet light. It is practically impossible to remove and allows metal to be traced back to the building from which it was taken, thus removing the anonymity of the metal.

A number of metal thieves are in prison right now thanks to SmartWater; indeed it is so effective that its use is now a condition of most church insurance policies.

It is important to note that not only must the SmartWater be applied and the appropriate warning signs displayed, the SmartWater must also be registered for the insurance cover to be valid.

SmartWater has a limited life and experience has shown that it needs to be replaced at least every five years (and ideally every three years) in order to remain effective. It may also be used to protect other valuable items within churches such as stonework and Communion plate, and the website is at <http://www.smartwater.com>.

SelectaDNA® (<http://www.selectadna.co.uk>) is a similar product using microdots which is recommended by one insurer and used by Network Rail to protect its metal cables from theft.

Roof alarm systems are not cheap, but they are effective. In one case known to the author, two rural churches in Lancashire about four miles apart were targeted by lead thieves on the same night. One of the churches had been fitted with a roof alarm which activated, causing the thieves to flee empty-handed. The other church sadly had no roof alarm and, whilst only a small piece of lead was stolen, the consequential damage to the stonework cost nearly £10,000 to make good.

A typical roof alarm system will cost around £7,000 (plus VAT, which for listed churches can be reclaimed) plus a monthly fee for monitoring if – as is recommended – the alarm is linked to a monitoring station. The systems are designed to minimise the likelihood of false alarms.

Insurers offer improved cover for metals protected by an approved alarm system and so when considering a roof alarm it is essential that you seek your insurer's advice.

CCTV systems may be used in conjunction with a roof alarm system but there are disadvantages to doing so. First, there is the cost, which is likely to be a similar sum to the roof alarm if not greater. Secondly, criminals can hide their faces to avoid identification. Thirdly, the CCTV cameras themselves can become a target for theft.

Strobe lighting and / or **Security Smoke** may also be connected to a roof alarm system to disorientate any criminals who make it on to the roof and to draw attention to the crime taking place.

Please remember that – with the exception of a routine application of forensic marking solutions - all the anti-theft measures discussed in this section will require a Faculty and may well require Planning Permission.

In The Event Of Metal Theft

If you discover that metal has been stolen from your church, your two priorities are 1) Report it and 2) Prevent further damage.

When you report the incident to the Police, make sure you get them to log the incident as **Heritage Crime**. This will help ensure stiffer sentences for the perpetrators if they are convicted; it also helps the Police track crimes of this nature and work towards preventing future crimes.

You should also let your insurers know, together with your Archdeacon and the Diocesan Advisory Committee (DAC). If the building is Listed Grade I or II* you must also inform Historic England

You will need to make temporary repairs to prevent water getting in to the building where lead has been stolen from the roof – your Archdeacon should be able to authorise these.

If the theft occurred some time before it was noticed there may already have been considerable water ingress which will need to be dealt with.

If the theft is discovered shortly after it occurred, remember the likelihood that the thieves could return. This is particularly true if there is still a substantial amount of metal in place. Increase vigilance, consider engaging a firm of security guards to patrol at night and make sure any items which could assist the thieves on their return are removed. Check to see if any stolen metal has been left nearby – in bins or under bushes, perhaps – for the thieves to collect upon their return.

You will need to begin the process of thinking how the stolen metal will be replaced, either with the same material or an alternative, and how this will be paid for. You will also need to look at improved security measures. You are not alone, however: your Architect, the DAC and the Heritage Officer are all here to guide and assist you through this process.

Further Guidance and Information

Historic England, "Metal Theft from Historic Buildings" (2017), available as free PDF download at

<https://content.historicengland.org.uk/images-books/publications/metal-theft-from-historic-buildings/heag128-metal-theft-historic-buildings.pdf/>

Ecclesiastical Insurance, various useful items including a self-assessment tool for determining risk available at

<http://www.ecclesiastical.com/churchmatters/churchguidance/churchsecurity/theftofmetal/index.aspx>

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