

HERITAGE SUPPLEMENT



Keep YOUR BUSINESS IN BUSINESS



**West Midlands Fire Service and
West Midlands Police
Arson Task Force**

1ST EDITION : FEBRUARY 2013



Prevention

Protection

Response

Making West Midlands Safer

WEST MIDLANDS FIRE SERVICE

www.wmfs.net

KEEP YOUR BUSINESS IN BUSINESS

HERITAGE SUPPLEMENT

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ADDITIONAL SECTIONS:

www.wmarsontaskforce.gov.uk/kybib

INTRODUCTION



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The collective value of this nation's heritage has been recognised nationally by the UK Government and large organisations who care.

In 2001 the Government, following a review of the historic environment found that heritage buildings:

- Contribute to local character and sense of place.
- Influence how we identify ourselves as individuals and communities.
- Shape our relationship with nature and the spiritual world.
- Enhance our quality of life.
- Contribute to the local economy by providing employment through associated business enterprises and through tourism.¹

¹ The Historic Environment - A Force for a Future, Section 1-3 DCMS, 2001

INTRODUCTION

You, as an owner or guardian of a heritage property or artefact, are responsible for its protection for future generations to appreciate and enjoy.

This supplement will provide you with useful advice on how to do this successfully.

This heritage supplement applies equally to buildings that are a part of our built heritage and to premises that contain objects with cultural and historic significance. By taking precautions and updating working practices, you can minimise the risk and impact of any unforeseen incidents, including criminal acts.

To recognise the specific issues that affect fire and crime risk reduction of heritage buildings and artefacts we have created this supplement. It is designed to work with the other sections in Keep Your Business in Business (KYBIB) which gives guidance on fire and crime reduction measures www.wmarsontaskforce.gov.uk/kybib.

Fire Risk Assessments (FRAs) are mandatory in all but domestic premises under Article 9 of the Regulatory Reform (Fire Safety) Order 2005 (FSO). Many buildings including heritage and historic properties will be required to undertake a fire risk assessment. Each of the 11 guides accompanying the Order, (www.gov.uk/workplace-fire-safety-your-responsibilities/fire-safety-advice-documents) produced to assist a responsible person to progress a fire risk assessment and identify additional precaution and prevention arrangements has an 'Appendix C, Heritage buildings'. This appendix offers additional advice for your circumstances. The FRA section of KYBIB additionally will give guidance about which law applies, who is the responsible person and what measures must be taken.

This supplement is intended to help you to keep the nation's heritage buildings and their contents safe.

There are approximately 371,000 listed building entries (Grade I, II* and II) in England alone. All heritage premises (listed or otherwise) and artefacts are at risk from fire and crime.

Memorable high profile fires causing significant damage include those at Windsor Castle (1992) and Cutty Sark (2007), both treasured Grade I listed structures.



© Martin Beddall



© Elfar Ingvarsson

In both cases funds were forthcoming to reinstate the lost structures, reportedly £37m and £10m (the structural members and the artefacts that were destroyed are lost forever). In part these fires are memorable for affecting structures where it may be assumed fire precautions/procedures were in place (as they were) and a fire would be unlikely. However, the unexpected occurred. Following investigations the probable respective causes were conservators lamps left switched on behind heavy curtains and an industrial vacuum left running overnight. There are many heritage fires that do not make national news. It has been reported that for the period January 2002 to June 2006, on average, seven UK heritage buildings per month were lost or damaged as a result of fire.²

Too much care therefore cannot be taken to protect your heritage building and/or artefacts. We hope you will never suffer a similar loss, that could be reported in future editions of this supplement.



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² The Cost of History: Fire Risk Management Journal (February Ed. 2008)

While the immediate fire attracts the main headlines in reported heritage fire incidents (accident and deliberate) it must be realised that areas not damaged by flame or heat will, most likely, be damaged by smoke, dirt and falling debris or by volumes of water which may be used in fighting the fire. After the incident the building may be structurally unstable, open to wind, weather and vandalism, and susceptible to natural events caused by high residual moisture content in the fabric (e.g. exfoliation, cracking, production of efflorescence, rot and decay). The nature of historic buildings, with voids and cavities provides pathways for unseen fire and smoke.³ Other incidents caused by flooding, structural failure or weather can have similar catastrophic outcomes that can likewise affect the building and/or artefacts over time.

Fires that develop into major incidents are most likely to occur during the night or when the building is empty. By planning for these types of incidents, the likelihood of retaining heritage buildings and artefacts can be increased.

Prevention is better than cure (or damage limitation), indeed in many cases heritage is unique and 'cure' is not an option. The main document of KYBIB contains a great deal of information about preventing a fire or crime incident from ever occurring. It also contains information about how to protect yourself, your staff and your heritage from an escalation of that incident.

When considering a suitable location to contain or store heritage valuables within a building, the longer the store area (e.g. room, specialist heat resistant structure, metal cupboard) is safe from the ingress of fire the better. Another way of viewing what may be needed to protect stored heritage artefacts is to consider the time between a fire starting and next accessing the store. This can include the time that passes before a fire is discovered, the time for the Fire Service to be called, their arrival, assessment and set up, fighting the fire and reaching the store.

If a room is chosen for storing heritage artefacts thought needs to be given to the fire resistance offered by walls, floors, ceilings, doors, service openings, etc. In addressing these issues, should fire threaten to consume your structure and salvage is not possible, you may have enabled sufficient time for the Fire Service to save your valuable heritage.

³ Amended from Technical Advice Note (TAN) No. 22: Fire Risk Management in Heritage Buildings, Historic Scotland superseded by Guide for Practitioners 7: Fire Safety Management in Traditional Buildings July 2010.

THE PARTNERSHIP APPROACH

It is clear that long term risk reduction requires a partnership approach. To this end we advise that you should get to know your Fire Service Heritage lead officer and ensure that the Fire Service knows of your premises and the need for its preservation. Many Fire Services are investing in specialist equipment that could include salvage equipment. Ensure you understand and appreciate each other's requirements.

At an emergency salvage exercise at Walmer Castle, Kent involving only in-house staff after three hours the original objectives had not been met. A repeat exercise involving Fire Service professionals took just 18 minutes and met its objectives.

The Fire Service may be able to assist you with your training requirements. Many Fire Services offer courses designed to assist you to carrying out mandatory fire risk assessment and other duties.

We suggest that you also ensure that you make contact with your local fire station to set in train a good working relationship. One way to do this is to invite firefighters to visit your property and even carry out joint training on your site so that you can improve their knowledge and understanding of your premises in order to be better prepared should that emergency occur.

We suggest you also contact your local Fire Brigades' Youth Services team and encourage their affiliated groups to visit and appreciate your premises.

In order to gain crime prevention advice we suggest you make contact with your local Crime Prevention or Architectural Liaison Officer who can offer impartial, specialist advice from his or her knowledge of the security technology that is now available.

If the worst happens to you, comprehensive well rehearsed emergency plans will be invaluable. The following guidance will help you to create an emergency plan on which you can depend, and that you can share with Fire Service and Police partners.

If your premises' insurance is underwritten by the Government, it is a pre-requisite that you can demonstrate that an emergency plan is in place. This advice is of equal importance if you are looking after any of the nation's heritage (whether a building, artefact or otherwise).

To safeguard culturally important property you may need to go beyond legal compliance (which normally relates only to life safety matters) or satisfying insurers' requirements for emergency plans and consider whether you are harbouring risks which need to be mitigated or improved.

Shannon's Mill, Walsall, West Midlands, August 2007 - Grade II (vacant building), 50 pump fire at proposed £53M development



© WMFS Photography

Contents of the Emergency Plan

- A) A Map and Plan of the Buildings**
- B) Contact and Facilities List**
- C) The Salvage/Damage Limitation Plan**
- D) Flood Preparation**
- E) Contingency Planning and Disaster Recovery**

A) A Map and Plan of the Buildings

As the owner or occupier of a heritage site you will understand the need for having available a site plan and detailed drawings of the buildings on the site. The drawings are simply a pictorial view to enable someone who has never been to the site to understand its layout and key features and can easily be updated. The best and most useful plans will be easy to understand and will include at least the following:

- entrances and exits – the principal entrance to the site to be used by responding fire appliances should be clearly signed
- details of gas, electricity and water supplies and locations of shut-off points
- fire hydrants – and, if present, the location of any water meter bypass
- drains
- nearby water supplies (canals, lakes and rivers) – access to these should be signed if they are to be used to extract firefighting water
- dangerous areas – including areas which will not bear the weight of a fire appliance
- fuel storage tanks
- roads, paths and walkways
- unusual architectural features.

B) Contact and Facilities List

In your emergency plan it is vital to include a detailed contact list of your own key staff as well as contacts for any facilities you have identified that are required. Often emergencies occur at the worst time (e.g. in the middle of the night, on a Sunday). Record contact details for:

- emergency managers
- key holders
- off site storage contacts
- salvage specialists
- press officers
- security contacts
- data recovery specialists
- conservation specialists
- emergency transport contacts.

It may be beneficial to communicate this information in advance to the emergency services or have it readily available when they arrive on site.

C) The Salvage/Damage Limitation Plan

The very nature of most heritage, and heritage buildings and their contents will require a comprehensive and prioritised salvage or damage limitation plan as part of your emergency planning.

The plan, which is part of the emergency manual, should identify:

- the personnel responsible for salvage operations, including the Salvage Officer and their Deputy
- training of the salvage teams
- salvage priorities
- salvage procedures
- emergency first aid conservation
- further treatment procedures
- method of handling/removing large or weighty objects
- designated temporary safe storage areas.

Further detail relating to some of these subjects is given below.

Training of the Salvage Teams

Training should be part of the planning exercise:

- write a plan – be flexible
- undertake a desk-top exercise
- revise plans
- undertake a larger ‘in-house’ exercise
- revise plan
- full-scale exercise involving outside organisations.

Salvage teams may need to enter a building which has suffered fire or other damage. They will only be allowed in those areas which the Officer in Charge of the Fire and Rescue Service gives permission. It is important that you and your salvage team do not stray beyond those areas specified by the Officer in Charge and that you all know what the evacuation signal is.

There should be a check in/out procedure so that everyone can be accounted for if an evacuation takes place. Everyone should be aware of the evacuation procedure.

EMERGENCY PLANNING

To allow access, the salvage teams should have Personal Protective Equipment which includes:

- identification
- hard hats
- fluorescent jackets
- steel toed and mid sole plated boots/shoes
- torches
- eye protection
- gloves.

Salvage training with the West Midlands Fire Service (WMFS)



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The training should include how to undertake a personal safety assessment and working safely in adverse conditions such as after a fire incident or flood. Risks to consider when undertaking salvage work are:

- manual handling
- trips and slips
- objects falling (e.g. tiles)
- overhead working
- burns and scalds
- electric shock
- smoke inhalation
- structural collapse
- drowning.

More practical aspects of training should include reading plans, identifying objects on the salvage list, removing paintings from their fixings, object handling and first aid treatment of damaged objects. All these should be practiced in simulated conditions. These practices should periodically include joint exercises with your Fire and Rescue Service.

An effective method of moving large numbers of objects has been found to be the formation of a human chain. This involves a line of people who pass objects from one to the other. To be effective the distance between each person in the chain should be such that the objects can be passed down the line without anyone needing to move. The disadvantage of a chain is the number of times the objects are handled, but this should be weighed against the speed of operations.

In setting up a salvage team appropriate liaison needs to be undertaken with your insurers including insurance cover when undertaking training.

Salvage Priorities (Priority/Room Lists)

These 'salvage lists' are best in the form of photographs of the items to be rescued, their position in the room and building dimensions, and any special techniques or measures needed to remove them. This may be the manual handling requirements, removal techniques, or equipment required. Monetary value of the exhibits should not be included for security reasons but their priority should be made clear. If a room is completely filled with items of similar value, it is still worth sorting them into an order of removal taking into account vulnerability and ease of removal. This could perhaps be by order of rarity, historic significance, ownership, or simply ease of removal rather than giving them all a 'Priority One' rating.

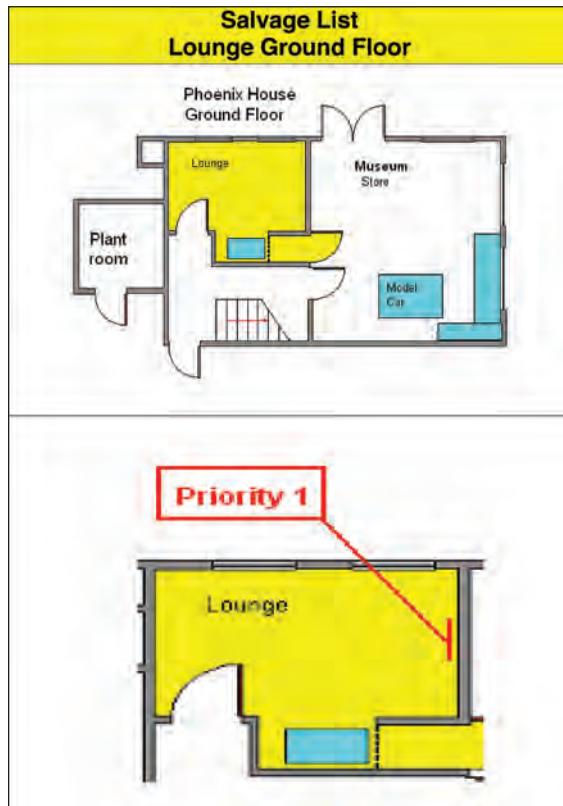
Where possible, the proposed temporary storage or interim safe location should be specified on the card.

EMERGENCY PLANNING

If keys or special tools are needed then this should be explicitly stated and if the keys are not included in a pack with the Room Card their location and identification details should be included, e.g. 'Keys for corner china cabinet are labelled 17 – 22 in No. 1 Keybox in housekeeper's office'.

Typical Salvage Room Plan

Lounge	
Priority 1 Man with Blue Jacket; Poste by Van Gogh	
 450 mm width 650 mm height	
 Weight: Medium	REMOVAL Wear Gloves Support base Do not touch painting surface PTO
Painting Poste Vincent Van Gogh Inventory No. _____ Wet or Damp Contaminated Broken Weak Dangerous Mouldy Smoke Damaged Other Pack As Is Dry and Pack Keep Wet and Freeze Wash then Dry Other	



© English Heritage

A description of the painting is sometimes more useful than the title, eg. Man with blue jacket, as above.

Such documents should be regarded as confidential and be retained under strict control. Numbering of all copies is recommended with no unauthorised copying allowed.

Salvage Procedures

The procedures for salvage will vary according to the scale of the incident, but it is a worthwhile exercise to plan for the worst-case scenario and for removal of all the objects.

Points to consider are:

- contacts
- specialist facilities
- floor plans
- key to floor plans
- salvage information
- procedures for removal of items
- equipment
- response equipment
- composition of salvage teams
- safe areas to store objects
- arrangements for the longer term storage or treatment of objects
- salvage store, fixed or mobile
- maintenance of salvage equipment.

First Aid Treatment

The first few hours after an emergency are critical to the long term survival of fragile historic artefacts. If the condition of the objects can be stabilised as soon as possible long-term damage and mould can be avoided.

The emergency plan should include the provision of equipment to treat objects and a suitable place, either permanent or temporary for treatment.



© Per Rohlen

The picture shows temporary shelters and tables for the preparation of fire damaged books. These are being prepared for shipment to a specialist deep freeze and restoration facility.

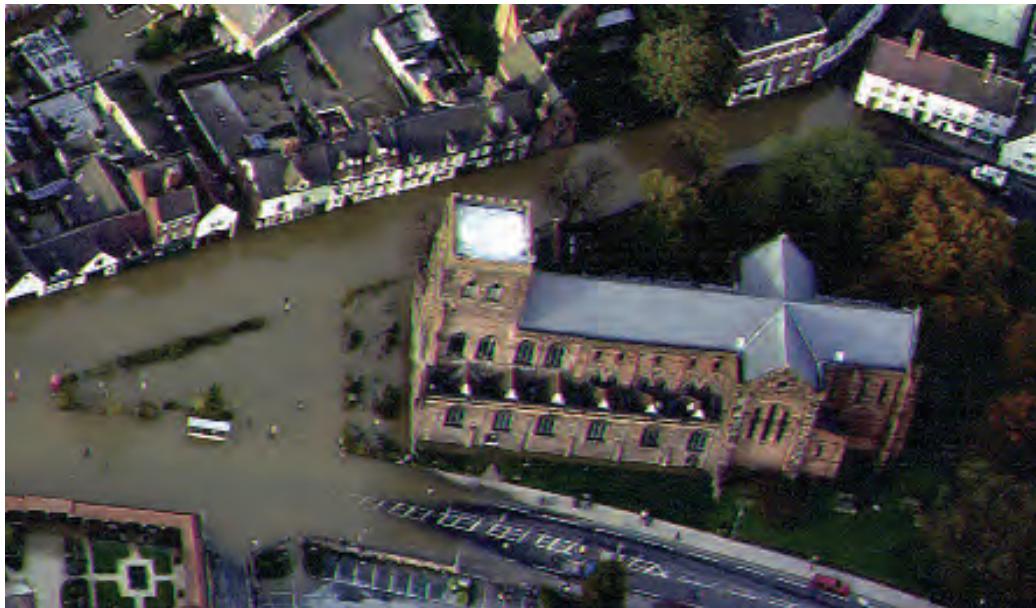
D) Flood Preparation

Advice relating to preparing for and dealing with a flood is contained in the main sections of KYBIB (www.wmarsontaskforce.gov.uk/kybib), or see the 'Useful References' section to this supplement.

E) Contingency Planning and Disaster Recovery

Please see details in the 'Contingency Planning and Disaster Recovery' section within KYBIB (www.wmarsontaskforce.gov.uk/kybib).

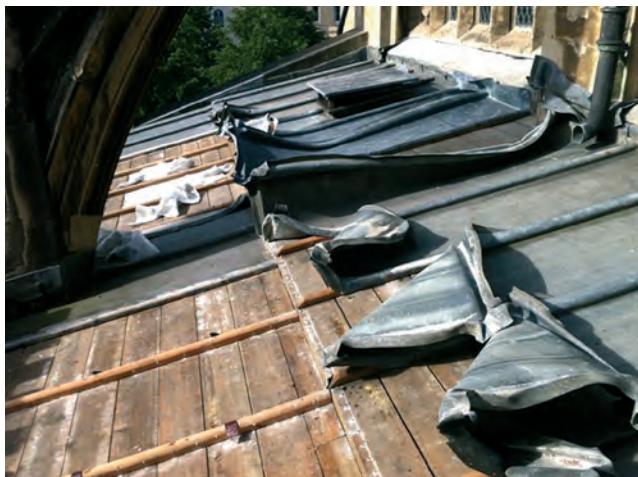
**IF YOU DISCOVER A FIRE - CALL THE FIRE SERVICE
999 or 112**



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METAL THEFT

Since 2008 there has been a significant increase in thefts of metal (predominantly lead, copper, and brass) from places of worship as well as other historic buildings. English Heritage records that in the 12 months period up to early 2012, one in six of the 14,500 listed religious buildings had suffered at least one episode of metal theft (and one in three had been damaged by crime).⁴



© Ecclesiastical Insurance Group plc

Thieves see this type of crime as 'low risk and high reward' given the high prices now paid for non-ferrous metals. The risk is perceived to be low due to the ease with which such materials can be stolen given the difficulty of providing effective security against intruders.

One of the main issues is the isolation of many target buildings and the lack of any identification mark on the items stolen. If the police can't prove the origin of the theft then there is little chance of a successful prosecution for theft or burglary.

⁴ Heritage Crime: The Size of the Problem – Alliance To Reduce Crime Against Heritage (ARCH) 2012

By the end of 2010, Ecclesiastical Insurance Group, the main insurer of Anglican churches, reported claims related to metal theft of over £22m per annum. Lead sheet was the main target and a significant proportion of this cost was for making good the damage caused by the thieves and the subsequent ingress of water.⁵ The threat remains, for example:

In October 2011 an article in the Telegraph⁶ reported large quantities of lead had been removed from the historic Bishops Palace in Lincoln, a £10,000 bronze statue of a Second World War soldier had been stolen from a memorial in Tidworth, Wiltshire by thieves and at York Minster historic plaques worth thousands of pounds had been wrenched from the walls of the Gothic Cathedral by metal thieves. A spoke for English Heritage was reported as saying “the current metal theft epidemic is one of the biggest threats to this countries heritage”.

In 2012 a foiled theft of lead worth around £200 at Aston Hall, Birmingham resulted in a repair bill of over £7K (venue of this Heritage Supplement launch).

At the end of 2012, eight men were sentenced to a total of 23 years in prison at Birmingham Crown Court following a conviction of stealing copper cabling, leaving Network Rail with a repair, replacement and compensation bill approaching £500,000.⁷

Top Tips:

- Minimise easy access to building by removing such aids as water butts, waste bins and by pruning trees
- Store ladders in a safe/secure place
- Keep gates locked and restrict vehicular access when possible
- Maximise surveillance levels including cutting back trees and vegetation which could provide cover for the offender
- Carry out regular checks on roofs so any thefts of roofing material are found before rain damages the building
- Encourage members of the local community to keep a vigilant eye on the building and report any suspicious behaviour
- Ask Police Community Support Officer's (PCSO's) and Police Officers to include church and other heritage buildings on their patrol
- Apply anti-climb paint to drain pipes and roof guttering (with advising notices displayed)
- Protect lower sections of lightening conductor ribbons with a metal cage or sheath
- Consider installing security lighting and/ or CCTV
- Security mark metal such as copper and lead with covert security marking

⁵ English Heritage Guidance Note: Theft of Metal from Church Buildings 2011

⁶ Telegraph, 27th October 2011, www.telegraph.co.uk/news/uknews/crime/8850768/Metal-theft-epidemic-one-of-biggest-threat-to-UKs-heritage.html

⁷ Telegraph, 19th December 2012, www.telegraph.co.uk/news/uknews/road-and-rail-transport/9756212/Romanian-metal-theft-gang-jailed.html

- products or overtly
- Consider installing an intruder alarm or a roof alarm
- Consider fitting proprietary security fixings to lead roofing
- Make extra security arrangements when scaffolding is in use for repair work.

Theft of electrical copper cabling is putting peoples lives at risk.

In late 2012 the entire village of Newton-on-Trent, Lincolnshire lost eletric power when 1,000m of overhead electric cabling was stolen. A Chief Fire Officers Assocation (CFOA) circular (ref 2015-015) highlighted electrical cable theft can cause fires and be fatal.

During July 2011, two gas explosions at a row of terraced houses on Rhode Street, Castleford were directly caused by the attempted theft of overhead copper electric cable (see below). In this instance it was fortunate that all residents had been evacuated prior to the explosions, although two firefighters did receive minor injuries⁸. The damaged houses were subsequently demolished. A BBC report on the explosions⁹ also includes 'the incident comes days after a boy died during a suspected metal theft from a substation in Leeds'.

For more detail of crime reduction and how to carry out a crime reduction survey please refer to the Business Best Practice – Crime Reduction section of KYBIB (www.wmarsontaskforce.gov.uk/kybib).



© West Yorkshire Fire and Rescue

Don't overlook the fact that providing security improvements will also reduce the likelihood of malicious fires.

IF YOU DISCOVER A CRIME - CALL THE POLICE
999 or 112

⁸ 'Castleford explosion' video - <http://www.westyorksfire.gov.uk/safety-campaigns/castleford-explosion>

⁹ BBC, 8th July 2011 - www.bbc.co.uk/news/uk-england-leeds-14075618

NOTABLE ORGANISATIONS

English Heritage

(www.english-heritage.org.uk)



In September 2011 English Heritage updated its guidance 'Theft of Metals from Church Buildings' supporting the replacement of lead for lead with security additions but acknowledges that in some cases that policy is not prudent. In such situations following a theft they will consider supporting proposals of replacing stolen lead with alternative materials.

(English Heritage is the Government's statutory adviser on the historic environment)

Alliance to Reduce Crime Against Heritage



The Alliance to Reduce Crime against Heritage (ARCH) is a new voluntary national network which will take forward initiatives to tackle heritage crime and galvanise local action as part of the Heritage Crime Programme.

The overriding objective of the group is to reduce the amount of crime that causes damage to or interferes with the enjoyment of heritage assets in England.

Members of ARCH have a shared interest in preventing and seeing effective enforcement of heritage crime. Through conferences and training events, the group will be a means of discussing priorities, sharing information about heritage crime, carrying out training, highlighting best practice and making local contacts.



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USEFUL CONTACTS

West Midlands Fire Service

Fire Safety Policy Team (0121 380 6722)

West Midlands Arson Task Force

Watch Commander, West Midland Fire Service (0121 380 6733)

West Midlands Police

Sergeant, Force Crime Prevention Officer (0121 380 6733)

Other useful contact numbers can be found in KYBIB

www.wmarsontaskforce.gov.uk/kybib

USEFUL REFERENCES

Further reading and other useful reference materials listed below:

Arson Risk Reduction: Preserving life and Lancashire's Industrial Heritage: Lancashire Fire & Rescue Service (in conjunction with English Heritage) 2012

COST Action C17: Built Heritage: Fire Loss to Historic Buildings: Final Report 2007 (COST - Cooperation in Science and Technology)

Flooding and Historic Buildings: English Heritage 2010

Heritage under Fire, A Guide to the Protection of Heritage Buildings: Stewart Kidd 1995

Historic Scotland, Guide for Practitioners 7:- Fire Safety Management in Traditional Buildings Parts 1 and 2. 2010 (note that although this guide has approved code of practice status in Scotland, in the absence of a compatible text for England and Wales it may be useful in persuading planners, building control departments and approved inspectors that alternative approaches to fire protection may be acceptable)

How building design can reduce the threat from arson: Arson Prevention Bureau 1997

Lighting Against Crime: A Guide for Crime Reduction Professionals - Peter Kane 2011

Regulatory Reform (Fire Safety) Order 2005 (applies to all non-domestic premises) & supporting Fire Safety Risk Assessment Guides (11 No.) produced by Communities and Local Government (CLG)
www.legislation.gov.uk/uksi/2005/1541/made
www.gov.uk/workplace-fire-safety-your-responsibilities/fire-safety-advice-documents

Theft of Metal From Church Buildings: English Heritage Guidance Note 2011

Timber panelled doors and fire: English Heritage 1997

Vacant Historic Buildings, An owner's guide to temporary uses, maintenance and mothballing: English Heritage 2011

Organisations that offer relevant information/support:

British Red Cross, Fire Emergency Support Service

English Heritage, Fire Research Database (FReD), accessed on the internet
fred.english-heritage.org.uk/

Environmental Agency, Flood

REVIEW

We intend to review, update and improve this supplement to ensure its continued reference.

If you have knowledge or comments that could be included in future Heritage Supplement editions to improve this reference document and help protect our heritage, please contact Nick Hunt, WMFS on 0121 380 6722.
Email: nick.hunt@wmfs.net

If there are any areas you would like to see covered in future Heritage Supplement editions, please contact Nick Hunt, WMFS on 0121 380 6722.
Email: nick.hunt@wmfs.net

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- Steve Emery: Fire Safety Adviser English Heritage.
- Stewart Kidd: Heritage Loss Prevention Consultant – ‘one of the world’s leading experts on the subject of protecting heritage properties’.
- Contributors to KYBIB and the West Midlands Arson Task Force.



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Compiled by Phil Butler (WM Police - retired), Jonathan Herrick and Nick Hunt (WMFS)

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The information contained in this Heritage Supplement is for general guidance on matters of fire safety and crime reduction only. The application and impact of laws can vary widely based on the specific facts involved and you are advised to seek further specialist advice if you are at all uncertain as to their application in relation to your business/premises/collection. Given the changing nature of laws, rules and regulations, and the inherent hazards of electronic communication, there may be delays, omissions or inaccuracies in the information contained in this Heritage Supplement.

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