

Protecting archives and manuscripts against disasters

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Introduction

The National Archives offers advice on all aspects of the long-term care and preservation of manuscripts. This advisory memorandum contains summary advice for the private owner on preparedness for, and recovery from, disasters which stop short of the total loss or destruction of the records.

Archives are vulnerable to many forces, ranging from unthinking neglect, to natural disasters such as storm or flood, to deliberate criminal acts such as burglary, arson or terrorist attack. It is emphasised that this memorandum does not cover all eventualities. In many circumstances it will of course be necessary to seek the professional guidance of an archivist and/or archive conservator. Where the emergency services have to be called in, care should also be taken to inform them of the nature and vulnerability of the material.

A number of useful books have been published, mainly aimed at professional custodians of archives in record offices, libraries and museums, covering strategies for identifying and minimising risks, and giving practical guidance on preparedness for disasters and on recovery if disaster strikes (including, for example, lists of equipment which it is useful to have to hand in an emergency). Some are listed at the end of this memorandum.

Private owners (both institutions and individuals) who wish to retain custody of their archives should be aware of the steps which they can take now to minimise the risk, as well as the appropriate action to take in an emergency. Businesses and corporate bodies may need to provide for their archives as part of a wider strategy against disasters, and to designate a manager for this purpose. Neighbouring businesses may wish to consider joint strategies.

Owners requiring guidance on storage accommodation for their archives are invited in the first instance to contact Archives Sector Development (asd@nationalarchives.gov.uk) which will then either advise direct, or put the owner in touch with an appropriate local or national record office or centre of specialist information. General advice on the good housekeeping, care and preservation of archives and manuscripts, including storage conditions and equipment, environmental controls, protection against fire, and first aid in the event of damp, is given in the free pamphlet, *The care of records: notes for the owner or custodian* (from the British Records Association or from The National Archives).

Other sources of information and assistance:

- [Preservation Advisory Centre](#)
- [British Records Association](#)
- [Business Archives Council](#)
- [National Archives of Scotland](#)
- [Public Record Office of Northern Ireland](#)

Much can be done in advance to prepare and protect against disasters, in particular by assessing the risks. The following sections make some suggestions.

Flood

- Where, and in what circumstances could water get into the premises?
- Consider in particular risks of storm, burst pipes, blocked drains or gutters, and water generated during fire-fighting
- Study the location of doors and windows, drainpipes, hot and cold water tanks and pipes, sewerage services, and internal or external drains.
- Carry out a periodic check on the general soundness of the fabric including the roof, especially any flat roofs or valley gutters

Suggestions

1. Avoid basement storage whenever possible
2. Check that there is a means of egress for any water that may get in
3. Raise the bottom shelf of any storage at least 150mm off the floor
4. Leave a small gap between any shelving and outer walls so that documents or the boxes in which they are contained do not touch the walls
5. Do not leave documents piled on floors or beside windows
6. The provision of acid-free archive storage boxes offers considerable protection. Your nearest record office should be able to recommend a supplier
7. In premises where no other emergency lighting is available, keep a powerful torch to hand for use in an emergency
8. In premises where there is an obvious risk of flooding, it may be worth installing flood alarms if these can be monitored out of hours

In the event of a flood

Quick remedial action is necessary, to prevent the growth of mould which may occur within 2 to 3 days of water damage. But first make sure that the premises are safe and that the affected area is not 'live' from the electricity supply.

If the flooding is localised, undamaged materials may be protected temporarily (if necessary) using polythene sheeting. Rescue any affected items and remove them to a dry, preferably cool room, starting with material on upper shelves. For relatively undamaged materials gentle first-aid may be attempted with clean cloths, or by inter-leaving with clean blotting paper, but note that items on coated paper require swift professional attention, and in all other cases if inks or dyes begin to run or dirt to spread, the items should be left for urgent professional attention. Damp but not saturated volumes may be stood upright with the pages slightly fanned out to dry naturally. If air-blowers are used to assist the drying-out process, they should be kept on a cool setting, as heat may promote mould growth. Saturated materials can be very susceptible to damage and should be handled with care. They should not be piled on top of one another, nor should any attempt be made at this stage to separate pages that are stuck together. Seek professional advice on packing for transport.

After draining the disaster area, ventilate it well and if necessary hire a portable dehumidifier until the relative humidity has stabilised within the range 45-60%. Keep an eye on apparently

unaffected items, which may suffer longer-term damage if the flood has seriously altered the relative humidity level.

If the flooding is more serious and especially if large quantities of documents are involved, contact your nearest record office for advice. Remedial treatment may include freezing the damaged material until such time as it can be safely dried out. Some record offices now have small freezers for this purpose, or standing arrangements with external contractors. There may be a charge for this service. Items which are to be removed from the premises for treatment should be individually wrapped in polythene bags or cling-film, and an inventory of them should be kept.

Fire

How and in what circumstances could a fire begin and/or take hold either in the storage area itself or elsewhere in the property, spreading to the archive store? Consider in particular the proximity of any open fires, or other sources of flame or heat such as kitchens or workshops, electrical short-circuits and lightning, or other potential sources of risk such as stored inflammable materials.

Suggestions

1. Where possible choose sturdily-built storage rooms with good fire-resistance, and ensure that doors and windows are tightly shut when the premises are unattended
2. Check that all wiring is sound and up-to-date, and all cabling insulated. Out of hours switch off, and preferably isolate, all inessential electricity
3. Install smoke detectors. In the case of large and valuable collections of documents it is desirable to have these linked automatically to the fire brigade or a security firm
4. Depending on the size of the storage area, provide one or more hand-held carbon dioxide fire extinguishers for use in the event of a small fire in the storage area. Water-based extinguishers are useful in adjacent rooms and corridors. In the case of larger collections of archives, where it might be appropriate to fit an automatic fire-extinguishing system, the advice of the local Fire Officer should be sought
5. Do not permit smoking
6. Keep loose papers to a minimum and avoid litter
7. Seek the guidance of the local fire brigade on how precautions might be improved

In the event of a fire

Ensure that the fire brigade is called immediately, and is informed that archives are at risk and a minimum of water should be used. The brigade will, however, almost certainly use water hoses, in which case it may be necessary to proceed as for flood. Once again, acid-free archive storage boxes can provide short-term protection.

Items damaged by fire can best be treated with the advice of a professional conservator. Contact your nearest record office.

Terrorist Attack/Bomb Damage

The threat from terrorist bombs is among the most difficult to counter simply by preparedness and planning. Recent experience shows the targets to be unpredictable and the force of the damage potentially devastating even to structures which are otherwise well equipped to resist lesser disasters such as flood and fire.

In high-risk inner-city areas or near to obvious (such as, military) targets, both institutional and private owners might wish to consider depositing all but their most current documents on loan for safe keeping in a secure repository outside the immediate danger zone.

In general, measures taken primarily to protect the people in the building (for example fitting anti-bomb-blast curtains or anti-shatter film on the windows) will also contribute to the protection of the documents, and should be seen as part of the overall strategy. Owners who consider their archives to be at particular risk should seek the advice of the police or of a security firm, and make any recommended structural reinforcements. A guide by the Metropolitan Police is listed below.

Suggestions

1. Outside normal working hours, do not leave any documents on tables or beside windows, but put them away securely in a fireproof storage area, which preferably has only a minimum of windows
2. Where possible store archives away from external doors, walls and windows
3. In the case of items or series which are thought especially valuable, whether for historic or administrative reasons, or which may be temporarily displayed in a more

- vulnerable area, consider having security copies made, for example on microfilm or optical disk, and stored at a different site. Electronic records should be regularly copied, and the back-up copies similarly kept in a different site from the originals
4. In business premises, especially in town- or city-centre sites, it may be advisable outside office hours to lock away securely any catalogues and finding aids to the archives, in order to restrict the opportunity afforded to looters etc. in a damaged building
 5. Do not allow litter or rubbish to accumulate either inside or outside the building, and be alert to any suspicious or unusual packages
 6. Advise the local police station of any keyholders to your premises

Preparing a Recovery Plan

Owners are recommended to:

1. Carry out an assessment (with the help of a local record office where appropriate) of the most likely risks, and draw up a provisional plan to assist recovery after disaster. The plan should take account of the worst possible case, including the exclusion of the archives' owner or custodian from the site by police or security authorities following the disaster
2. Take such immediate remedial action as may be appropriate, without waiting for disaster to strike
3. Get to know the premises well, including the location of switches, valves and stopcocks for the mains utilities
4. Store off site: a duplicate set of catalogues/finding aids; security back-up copies of any computerised data, and copies of any documentation of the computer system itself; a spare set of keys and (if appropriate) a sketch plan of the premises
5. Draw up a list of addresses and telephone numbers of people who may need to be contacted for help in an emergency, and keep copies handy both on site and off site. The list might include any available colleagues and, among local contacts: police station - fire station - caretaker/ managing agent of the premises - plumbers - locksmiths - glaziers - nearest record office - freezing contractor (with whom a standing arrangement should be made) - computer consultant or firm specialising in the recovery of computers from disaster insurers

(For more extensive archives):

6. Draw up an order of priorities in which the documents should be rescued/treated in the event of an emergency
7. Study the published manuals for guidance on supplies and equipment for use in an emergency

Further reading

Hazel Anderson and John E McIntyre, *Planning manual for disaster control in Scottish libraries and record offices* (National Library of Scotland, Edinburgh, 1985)

Ian Tregarthen Jenkin, *Disaster planning and preparedness: an outline disaster control plan* (British Library Information Guide 5, 1987)

Sally A Buchanan, *Disaster planning, preparedness and recovery for libraries and archives* (Unesco RAMP Study, PGI-88/WS/6, Paris 1988)

Claire England and Karen Evans, *Disaster management for libraries: planning and process* (Library Association, 1988)

Preservation Advisory Centre, [Disaster/emergency planning](#) (online resource)

Bombs - defusing the threat. A guide for small businesses (available from the Metropolitan Police, New Scotland Yard, Broadway, London SW1H 0BG)

Guidelines on disaster prevention ICA Committee on Disaster Prevention, in *ICA Studies*, 11 (December 1997)

Disaster prevention: facing up to risks, an article by the ICA Committee on Disaster Prevention, accompanied by an extensive bibliography, in *Archivum XLII* (1996), p283

T Padfield, *Disaster planning*, in *Business Archives* no 55 (May 1988), gives a useful short bibliography

For further information contact the Archives Sector Development, The National Archives, Kew, Richmond, Surrey TW9 4DU, telephone 020 8876 3444, email: asd@nationalarchives.gov.uk