Guidelines on preservation and conservation policies in the archives and libraries heritage

General Information Programme and UNISIST

United Nations Educational, Scientific and Cultural Organization

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GUIDELINES ON PRESERVATION AND CONSERVATION POLICIES
IN THE ARCHIVES AND LIBRARIES HERITAGE

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In order to assist in meeting the needs of Member States, particularly developing countries, in the specialized areas of Archives Administration and Records Management, the Division of the General Information Programme has developed a long-term Records and Archives Management Programme - RAMP.

The basic elements of RAMP reflect and contribute to the overall themes of the General Information Programme. RAMP thus includes projects, studies and other activities intended to:

- develop standards, rules, methods and other normative tools for the processing and transfer of specialized information and the creation of compatible information systems;
- enable developing countries to set up their own databases and to have access to those now in existence throughout the world, so as to increase the exchange and flow of information through the application of modern technologies;
- promote the development of specialized regional information networks;
- contribute to the harmonious development of compatible international information services and systems;
- set up national information systems and improve the various components of these systems;
- formulate development policies and plans in this field;
- train information specialists and users and develop the national and regional potential for education and training in the information sciences, library science and archives administration.

This study, which was prepared under contract with the International Federation of Library Associations and Institutions (IFLA), tackles the problem of conservation, made critical today by the extreme vulnerability of the paper used in the production of archival documents and library books, and explains the necessity of establishing and applying rational conservation and preservation policies.

Taking into account when necessary the specific characteristics of archives and libraries, the study aims, as the author says: "to define a set of guidelines which can be selectively applied according to the needs of collections in a variety of institutions".

In addition to an extensive bibliography, the study includes two appendices, the first on the security of collections and the second on conservation survey methodology.

Comments and suggestions regarding the study are welcomed, and should be addressed to the Division of the General Information Programme, UNESCO, 7 place de Fontenoy, F-7500 Paris. Other studies prepared under the RAMP programme may also be obtained at the same address.
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1. **INTRODUCTION**

1.1 Books and documents are made from organic raw materials largely plant fibres and animal skin. This makes them prone to decay and vulnerable to their environmental conditions; particularly the effects of pollutants and biological pests such as fungi, insects and rodents. The poor quality of the raw materials, particularly paper made from ground wood pulp, the use of alum-rosin sizes or the inappropriate tanning of book binding leathers, has exacerbated the problems. The preservation of books, manuscripts or other artifacts written or printed onto paper or vellum cannot be compared to the preservation of museum objects or works of art. Unlike the latter, books and documents are vital sources of information and they cannot be conserved and stored in an ideal and secure environment to arrest their decay. They are made to be used, read and studied and this requires that they be accessible for users and means that they will be subject to handling. Any form of use will accelerate the deterioration of the item and, ultimately, its destruction if intervention does not occur.

1.2 Those who are responsible for libraries and archives, librarians, curators, archivists and conservators, all have a professional duty to ensure that items within their collections are maintained in a condition appropriate to their use and their intrinsic value. This does not mean that all items must be, or should be, preserved indefinitely. At local, national or international level, the resources are not normally available to enable all items to be preserved for posterity. It is necessary for those with responsibility for libraries and archives to determine a policy for the preservation of their collection appropriate to the aims and objectives of the institution, the needs of users and the value of the individual items.

1.3 This study sets out guidelines for the preparation and implementation of a preservation policy. It includes those aspects of collection management which directly affect the preservation of the items within the collection and discusses some of the options which managers should consider when drawing up a preservation programme.
1.4 It is not possible to prepare a specific preservation policy suitable for adoption across the whole range of libraries and archives. Neither is it possible to compile a set of guidelines which will be appropriate in all circumstances. This study aims to define a set of guidelines which can be selectively applied according to the needs of collections in a variety of institutions.

1.5 There are differences between the role of a library and an archive as there are between types of libraries and types of archives. The legal obligations imposed on legal deposit libraries limit their freedom in some aspects of collection management as do the responsibilities of national archives and public record offices. The study refers to these differences specifically where it is felt to be appropriate. It is assumed that the responsibilities of specific organisations will be accounted for in their collection or repository management policy.

1.6 In this study, the use of the terms library or archive materials or collections refers only to information written or printed on paper or animal skins, including parchment and vellum.

2. PURPOSE AND SCOPE OF THE POLICY

2.1 A policy is a formal statement which embodies the aims and objectives of an organisation usually over a specified period of five, ten or more years. It is a statement of management intent which will be referred to during planning and decision making processes. To be effective, a policy must be under constant review. Reassessment based on experience, changes in the level of resources or the objectives of the organisation, should lead to revision and updating to ensure that it remains realistic and appropriate.
2.2 A policy for preservation cannot be prepared in isolation; it must form an integral part of the overall policy for collection or repository management. It must take full account of the aims and objectives of the organisation, the needs of users and the place of the collection or repository within a local, regional, national or even international framework.

2.3 The development of a preservation policy will be based on a variety of factors involved in the management of the collection or repository. The policy will be derived from balancing the needs and priorities of all aspects of the library's and archive's work and will influence the development of, and be influenced by, policies for other areas of work, such as loans, exhibitions and user services.

2.4 It will rarely be possible for an organisation to prepare a preservation policy consisting of a set of conditions and procedures to be applied over the whole of a collection. Most collections are made up of discrete groups or individual items which will require conditions and procedures appropriate to them. Few, if any libraries, would adopt the same policy for preserving a modern printed book and a unique item from a rare book collection; heritage items, such as the Book of Kells, Magna Carta or the written constitution of the country will require individual attention. Similarly, archives will draw some distinctions between the categories of records in their care even though all might be classified as "unique" in their content. The policy statement will, therefore, bring together a group of policies determined according to the value and use of groups of items or individual items.

2.5 Few, if any policies, could be issued to staff as statements of working practices to be followed. They must be interpreted and issued to staff as a set of guidelines or procedures which are appropriate to their responsibilities and working practices. This may require several levels of instruction or guideline, each designed to meet the needs of different staff with varying responsibilities and duties. All staff bear responsibility for the preservation of a collection and must have adequate recourse either for action or for obtaining advice or instruction.
3. FORMULATING THE POLICY

3.1 The preservation policy must be part of the overall strategy for the management of a collection or repository. The management policy will define three main elements:

(i) the range and level of material which will be acquired for the collection;

(ii) the length of time that material will be retained in the collection;

(iii) the use which will be made of the material within the collection.

The first of these, acquisitions or accruals, may need to take account of the initial cost of purchase or the conditions which may be attached to an exchange gift or loan. The second refers to the storage and preservation of the item or items and has cost implications based on accommodation, special requirements for storage and/or use and the likely need for future conservation work. The third defines the expected use of an item to determine the type of preservation necessary to ensure its availability to readers.

3.2 For each of these elements, acquisition or accrual, retention and use, the collection management policy will be determined to some extent by the financial resources available for preservation and the availability of appropriate storage facilities. If preservation funds were freely available it would be possible to define a management policy in isolation and to develop a preservation policy to meet it. However, it is more usual that there will be insufficient resources, and the preservation policy will need to determine priorities; this, in turn, will affect the acquisition and retention policies or the availability of items for use. It may prove impossible to keep all items indefinitely and some will have to be discarded after a defined period. Similarly, items intended for loan may have to become reference items or be placed on closed access to reduce wear and tear and lessen the need for full conservation treatment.
2.3 The value of an item will be determined in relation to the collection management policy. 'Value' will be determined according to intrinsic or scholarly worth: such as a fine binding, an important edition, an item from a special collection or owned by an eminent person, or by the heritage value to a nation, or by the usefulness of the item to readers; and will include such diverse materials as the most recent issue of journals and conference proceedings to scientists and engineers, and historical records to researchers in the social sciences and humanities. The main aim of a preservation policy should be to maintain items consistent with their defined value. This may require the preservation only of the intellectual content of the information in an item, or the preservation of the physical format of an item, where it is of value as an artifact and, in some cases, it will require the preservation of the content and the format.

3.4 In broad terms, a preservation policy should define the objectives which an organisation seeks to achieve in maintaining the structure and/or usefulness of its collection to meet the needs of its users. It should include:

(i) a set of standards for the storage, cleaning and handling of material;
(ii) a contingency plan for disaster recovery;
(iii) a maintenance programme to clean and repair damaged items;
(iv) priorities for conservation treatment;
(v) the introduction of surrogates to replace originals;
(vi) a programme of education for users and staff.

3.5 The type of use to which a collection is subjected will influence the preservation policy. A collection on closed access and available for reference only will be under stricter control by staff than one on open access freely available for loan. The form of materials, whether printed books, large sheet maps, music scores, or illuminated manuscripts, will assist in determining programmes for their storage, access and conservation
taking account of their physical structure and frequency of use. Similarly the raw materials and construction, such as modern single-sheet 'perfect' binding, rag paper, vellum binding, cased binding, will affect the programme appropriate for preservation.

3.6 Before embarking on the process of drawing up a policy, it will be necessary to undertake a series of surveys to provide the factual information from which a policy can be developed. These will include:

(i) surveying the building, including reading and storage areas, to assess the environmental conditions and the physical state of the storage units; taking measurements of lighting, temperature and humidity levels, and analysing dust and air samples to assess the levels of atmospheric pollution;

(ii) surveying the collections to identify areas of mould or insect infestation; assessing the scale of embrittlement of paper within books and investigating the type and amount of physical damage to individual items;

(iii) surveying the buildings to identify areas of potential hazard for security, fire or flood damage.

3.7 Many librarians and archivists will not be in the position of being able to rectify some of the problems which may be encountered at this stage. Where librarians and archivists are only tenants in a building owned, or operated, by another organisation or parent body (such as a government authority), providing the correct environmental conditions for storage, or correcting potential areas of flood or fire risk, can be very difficult. In cases where the environment is outside the control of the collection manager the correction or maintenance, of the physical environment may need to be dealt with outside the scope of the preservation policy.
4. THE POLICY DOCUMENT

4.1 The preservation policy will be a comprehensive document embracing a range of programmes to be applied to materials as appropriate. The policy will include:

(i) preventive measures to minimise the rate of deterioration;
(ii) housekeeping routines to clean, protect and extend the life of materials;
(iii) staff and user training programmes to promote and encourage correct handling and transport of materials;
(iv) security measures and contingency plans for disaster control and recovery;
(v) protective measures, such as boxing, binding, and wrapping, to reduce wear and tear on materials;
(vi) a substitution programme for replacing valuable or very brittle originals with surrogates such as microforms;
(vii) conservation treatments to repair damaged originals;
(viii) disposal programmes for materials of no further use;
(ix) procedures for reproducing originals;
(x) procedures for the exhibition of materials within the institution or whilst on loan to another organisation.

4.2 Preventive Measures

4.2.1 The physical environment in which materials are stored will have a significant effect on their life span. Environmental conditions such as temperature, humidity, light and atmospheric pollution can all affect the organic raw materials from which library and archive items are made.
4.2.2 A preservation policy should aim to achieve the best possible conditions for storing, using and exhibiting materials. However, financial resources, storage, accommodation and local climate will affect the extent to which these can be achieved.

4.2.3 Of prime importance is the maintenance of a stable environment. Large fluctuations in environmental conditions, particularly temperature and humidity, should be avoided. There should not be a significant difference between day and night conditions or the environmental conditions of storage areas and reading rooms. Temperatures should be maintained within the range of 16°C and 21°C and relative humidity levels should be between 40% and 60%. Thermometers and hygrometers should be installed so that temperature and humidity levels can be recorded and maintained at a satisfactory level.

4.2.4 Although control systems, such as air conditioning, are desirable to maintain optimum conditions, there are simple measures which can be used to good effect if operated properly and regularly by staff. For example, using windows and fans to ensure good air circulation, using insulation materials to control temperature, using blinds to restrict light, using dehumidifiers to remove moisture in areas of high humidity.

4.2.5 Where dust and dirt are particular problems, windows and doors should close properly with no gaps to allow air movement into and out of the building. Where necessary, seals should be fitted as an extra precaution.

4.2.6 Light can be particularly damaging to library and archive materials, especially high energy ultra violet light. The amount of light to which items are exposed must be controlled. Storage areas should be kept dark and lights used by staff for locating materials should be extinguished after use. It should also be remembered that most light sources also give out heat and that temperatures will therefore be higher near to light sources.
4.2.7 Photometers should be used to measure the amount of natural (sunlight) or artificial light falling on items. Blinds should be installed at windows and filters should be used on fluorescent lights to reduce light and heat levels. Light sources with an ultra violet content of more than 75 microwatts per lumen should be fitted with ultra violet filters. The level of lighting in reading rooms should provide adequate lighting for reading but not be excessive and in exhibition areas the amount of light falling on an item should not exceed 50 lux.

4.3 Housekeeping

4.3.1 Simple routines for the cleaning of storage areas and the cleaning and furbishing of items can do much to improve the environment and extend the life of materials. A preservation policy should specify the frequency and type of cleaning appropriate to storage areas and the items themselves.

4.3.2 Storage areas should be cleaned regularly to reduce any dirt and to remove dust and organic materials which attract fungi or animal pests. In specifying appropriate measures for cleaning, account must be taken of the damage which can be caused by cleaning equipment or materials. It will be necessary to introduce guidelines for safe practices such as storing cleaning fluids away from storage areas and prohibiting the emptying or filling of containers in the vicinity of library or archive materials. Books stored on low shelves may be scuffed and damaged by cleaning equipment but this can be prevented by specifying that books are stored above a safe minimum height or that the bottom shelf of a book case must be left empty.

4.3.3 The cleaning of library and archive materials will require trained staff working under close supervision. Where appropriately trained staff are available such programmes may be extended to include the refurbishment of leather bindings and simple repairs such as replacing loose pages, repairing torn pages, or attaching loose boards.
4.3.4 The monitoring of the physical state of individual items is the responsibility of all staff who have contact with the collections. All must be trained to recognise existing or potential problems and know the course of action available for correction. Such monitoring is usually only undertaken at the time that items are shelved or provided for readers; this is not sufficient. There must be comprehensive monitoring of items on the shelf to ensure that any deterioration is noted and incorporated into a programme for treatment as appropriate. This type of review could be incorporated into a stocktaking exercise as part of the security programme.

4.4 Training Programmes

4.4.1 Although materials can be harmed significantly by the environment in which they are stored or exhibited, all are at greatest risk in the hands of staff and users. Serious physical damage can be inflicted on items by careless and negligent handling some of which may arise from ignorance rather than wilfulness.

4.4.2 Staff and users must be educated to understand the vulnerability of the materials which they are handling and both formal training programmes and simple rules or guidelines should be available to all. Not only should the preservation policy include a statement of the responsible practices for care and handling, but it must also ensure that working conditions exist which enable staff to implement these practices.

4.4.3 Staff should be instructed in the removal and reshelving of items and be discouraged from carrying too many items at once or leaving items where they will be at risk of damage. Staff should be provided with adequate working space so that items can be safely placed on benches or tables avoiding the need to use floors, ladders, chairs or other surfaces where damage is likely to occur. Trolleys or other forms of transport must be soundly constructed and not pose the risk of damage to material during transit. Above all, staff must be made aware, through regular training programmes, of their own responsibility for the care and protection of material under their control.
4.4.4 It can be difficult to expect users to comply with the same regime of discipline as staff, but it is essential that all possible effort is made to instil a proper sense of responsibility and create a disciplined climate for study. A combination of written procedures and invigilation will be needed as part of the education programme. Some 'rules' are obvious and, usually, well accepted; for example, no writing in a book, no drinks in the reading or search room. However, many readers do not understand why they cannot pile books on the floor or lean on the text block during study. The preservation policy must take account of this problem and include education programmes for users and the institution should provide conditions to reduce or eliminate any risk.

4.4.5 Readers must be provided with a working environment which will enable them to use materials safely. Where items require reading supports or lights and lenses for close study, these must be readily available, clean and with adequate instruction provided for use. If users are required to wash their hands before, or to wear cotton gloves when handling materials, this should be made clear to them and the facilities and/or gloves should be provided. If the policy states that only pencils may be used in a reading or search room, these should be made available with sharpeners to cater for users who may be unaware of the rule or plead forgetfulness as an excuse to use ball points or other pens containing ink.

4.5 Security

4.5.1 The security of collections against theft, vandalism, natural disaster or fire is of the utmost importance. The prevention of such loss or damage to the collection generally requires a soundly constructed building incorporating warning systems, a system for monitoring and checking structural features, periodic testing of alarms and vigilance by staff at all times.

4.5.2 The preservation policy must specify the level of security which is required for the prevention of theft, fire, vandalism and water damage. The policy must specify the staff resources needed to ensure the effective operation of the security system through the activation of locks and
alarms, the monitoring of the building's structure and the initiation of remedial action when necessary.

4.5.3 The policy should specify those items requiring special conditions of security; for example, items to be kept in a strong room, items which may only be used under direct supervision by staff, items which must not be removed from the building.

4.5.4 The policy should include a contingency plan which can be implemented in case of fire or water damage, or in the event of a natural disaster which puts the safety of collections at risk. The contingency plan should include instructions for implementing a set of procedures which will ensure that items are salvaged and recovered in such a way that further damage will be prevented. The sorting, handling and drying of damaged materials requires that staff be trained and kept up-to-date with all the contingency arrangements.

4.5.5 A contingency plan must include a rota of staff who are trained to cope with an emergency and can be brought in quickly if required. One member of staff should always be on standby in case a crisis arises and he or she should know how to summon other help from emergency services or trained staff. Names and addresses of staff must be kept up to date so that they can be summoned without delay.

4.5.6 Appendix I describes some of the factors which should be considered in improving the security of collections.

4.6 Protection

4.6.1 Boxes, folders, envelopes or 'book shoes' made from long-lasting, inert materials can do much to extend the life of items and can be provided at a relatively low cost. Such protection can be used to limit the amount of dirt falling onto material, keep loose papers together, provide additional strength to a damaged binding and give added protection during transport.
4.6.2 Binding provides another form of protection by keeping loose items together, or by strengthening a paper or thin card cover on a periodical or paperback book. Although generally a more expensive option, binding is seen to have many advantages over boxing particularly in maintaining the order and security of loose papers or serial parts.

4.6.3 Loose papers, either individual documents or those which form part of a collection, can be given additional protection in guardbooks. Here, papers can be secured onto guards and held securely whilst still retaining the flexibility essential for their study. This method also allows individual papers to be removed and for items to be refiled at a later date; something which is not possible with a traditional binding.

4.6.4 The type of protection given will be determined by the nature of the originals, the type of use they receive and the cost. The preservation policy should include specifications for the type of materials from which the boxes, wrappers or binders will be constructed and guidelines for their pattern of use. In cases where this type of protection is a temporary measure, to be used for items awaiting conservation treatment or reprography to provide a surrogate, the policy should contain guidelines for monitoring and bringing forward items for longer term treatments.

4.6.5 Where papers are stored unbound within a box, folder or envelope it will be necessary to institute a checking procedure in reading and search rooms to ensure that all papers are returned to the correct box. These procedures should be specified within the preservation policy document.

4.6.6 Where items are protected by an additional covering there must be a means of recording the contents to facilitate access by staff and users. It is unlikely that this task will be carried out by preservation staff but procedures must be instituted to ensure that when additional protection is given the appropriate records are created.
4.7 Substitution

4.7.1 Where original items are in a poor physical state, or in cases where it is desirable to limit the use of an original, a substitute can be provided to readers. The most commonly used substitution material is microform but advances in technology are creating other media which might be used. Some institutions favour photoduplication using conventional photocopying machines to transfer the information onto a permanent paper. The availability of overhead photocopying machines enables fragile material to be copied with less risk of damage than is the case with conventional, flat-bed copiers.

4.7.2 Readers usually prefer to handle original items rather than substitutes. Therefore, if it has been decided within the management policy that substitutes must be used, it is important that readers are provided with good facilities for studying the substitutes and with written guidance and personal instruction for operating any equipment. The preservation policy must, therefore, have regard for providing and maintaining appropriate equipment and the necessary training or operating instructions should be available.

4.7.3 Providing a substitute is generally cheaper than conserving an original and, in some cases, is the only method available for preserving the intellectual content. Users generally find substitutes more acceptable when they appreciate the need for introducing such a policy. Incorporating a user education programme within the preservation policy may facilitate the smoother implementation of substitution programmes. This could take the form of poster displays and/or explanatory information leaflets.

4.8 Conservation

4.8.1 The craft of conserving library and archive materials requires a knowledge of the physical properties of the materials to be conserved and the application of many
manual skills. It is time consuming and, therefore, costly. For many items there will be a strong case for conservation and this will often be where an item is unique, is a heritage item or if the physical structure and format should be retained. The decision about which originals to retain will be made in the collection management policy.

4.8.2 Given sufficient resources, most librarians and archivists would prefer to conserve an item, rather than provide a substitute, and be to able to apply conservation treatment as required, rather than use boxes or folders. However, unlimited resources are rarely available and the collection management policy must allocate priorities to the categories of materials to be conserved.

4.8.3 Conservators have developed new techniques over recent years and now have a wide range of materials and equipment available to them. The preservation policy will define the type of treatments to be applied to individual items or groups of items. It is important that librarians and archivists work closely with conservators to ensure that the treatments applied are appropriate to the bibliographical and historical value of the item and the type of use it will receive.

4.8.4 In some cases it will be possible to specify treatments for a range of items but there will be cases where treatments will be specific to the original item. The preservation policy must be precise in specifying the type of treatment which can be applied or the consultation which must be undertaken before work starts.

4.8.5 In organisations without a conservation department it is important that the specifications for treatments to be undertaken by external contractors are precise. Again, the preservation policy must be specific either about the work which should be undertaken or provide for a high level of consultation to ensure that the work done is appropriate to the item and uses suitable materials.
4.8.6 The preservation programme should incorporate a system of record keeping to record any conservation work undertaken on an item. The nature of the work undertaken and the identification of previous structures or original production procedures uncovered at the time of disbinding, are of interest to many users, particularly bibliographers. These records should include details of the treatments applied, the date of the work and the materials used. This provides a record both for the present management of the collection and for future managers, conservators and researchers.

4.9 Disposal

4.9.1 The absence of a preservation policy, or the absence of a link between the preservation and collection management policies, is likely to lead to many items being neglected. Such items will be left on shelves with no preservation treatment at all and may deteriorate to such an extent that the conservation needed to make them available for use will be extensive and costly.

4.9.2 A preservation policy should not allow this to happen unless it is the result of a considered decision. The collection management policy should define those materials which should be kept indefinitely and specify a projected life for others. The preservation policy should ensure that items retain their usefulness for the duration of their retention.

4.9.3 All libraries and archives should give serious consideration to the disposal of items. Materials which no longer form a useful part of the collection should not occupy storage space and divert preservation resources from those that do. However, although the physical disposal of items may be the responsibility of a preservation department, the decision to dispose of an item will be part of the overall collection or repository management strategy.
4.10 Reprography

4.10.1 This can be a positive benefit in providing one user with the material needed for study whilst retaining the original for access by others. However, care is needed during copying to ensure that materials are carefully handled and that damage by heat and light from the copying equipment is avoided. The preservation policy should specify the limits or exclusions for copying to be applied to specific items or groups of items.

4.10.2 There may be items within collections which should not be copied; for example, illuminated manuscripts, whilst others can be copied safely given careful regard to their handling. Restrictions on the copying of materials should be determined within the preservation policy and appropriate equipment provided for either staff or reader use.

4.10.3 Where items such as scientific journals are expected to be copied regularly, the preservation policy should ensure that they are given some protection from the physical damage which can be caused. In the case of journals, unbound issues are easier to copy than long runs of bound copies. It would, therefore, be more appropriate to provide protection for individual parts rather than to bind such journals in volumes.

4.10.4 The likelihood of damage to materials will be reduced if trained staff are made available to undertake copying on behalf of users. However, the introduction of such a policy must be balanced against the cost of the staff resources it will require.

4.11 Exhibition and Loan

4.11.1 The preservation policy must specify the conditions of security, safety, physical display and environmental control under which items can be exhibited. This will include the presence of recording equipment within display cases and regular monitoring by staff.
4.11.2 Items on exhibition must be properly supported on book rests to prevent undue strain on the bindings. Where pages need to be held open, linen tapes can be laid across the open page and held, away from the page, by a small weight. Paperclips or any other object which might tear or otherwise damage the item, should never be used.

4.11.3 It is not advisable for items to be left on indefinite display. Where this does happen the preservation policy should include provision for turning pages periodically to prevent undue strain on bindings and to prevent differential discolouration due to exposure to light. There may be circumstances where high quality facsimiles could be displayed instead of originals.

4.11.4 The conditions of lighting, temperature and humidity described in Section 4.2 are applicable to items on exhibition. Where items are displayed in sealed cases it is important that readings of temperature and humidity be made inside the display cases as each will become its own microenvironment and conditions may vary from those within the display room.

4.11.5 Items on exhibition should not be exposed to a light level in excess of 50 lux. All materials, but especially those containing fugitive dyes or watercolours, should not receive a cumulated lighting level of more than 50,000 lux hours per year (ie. a light level of 50 lux for a thousand hours).

4.11.6 Items loaned to other institutions should be displayed under the conditions specified for internal exhibition. The preservation policy should include procedures for ensuring that its conditions are met by the borrowing institution and, if possible, for monitoring these conditions.

4.11.7 Items sent on loan outside the organisation must be transported under conditions appropriate to their preservation needs and escorted by staff where necessary. This will require that arrangements for security, packaging and transport of items on loan are specified within the policy.
5. IMPLEMENTATION

5.1 This document sets out to provide guidelines for preparing a preservation policy and concentrates on the planning and decision making necessary to prepare an appropriate policy within an institution. All organisations should be striving to provide the best standards for preserving their collections but in many cases the implementation of a policy may fall below this ideal.

5.2 It is important not to be too ambitious. All organisations must work within their resources and the most important part of the implementation process is to set priorities so that resources can be allocated according to need.

5.3 The first step in implementing a preservation policy should be to appoint a manager for the programme. The preservation manager must have sufficient authority to enable him or her to take and implement decisions which will inevitably affect other areas of the organisation. As preservation is part of collection management most decisions will be taken in consultation with others, but there may be times when action has to be taken quickly to respond to a changing situation or to avert a crisis.

5.4 In setting priorities and allocating resources it is worth remembering that the preventive and housekeeping measures, described in Sections 4.2 and 4.3, can do much to avert the need for costly conservation work at a later stage. Similarly, time invested in staff and user training can do much to prevent damage caused by mishandling and the wear and tear caused by frequent use.

5.5 Air purification and temperature control systems can be costly to install and maintain. The preservation manager should consider storing valuable and rare items together in a small area where the installation of such controls can be introduced at less cost. Similarly, where dust and dirt are a particular problem it might be possible to seal a small area and instigate a thorough and regular cleaning programme when it is impracticable to control conditions throughout a large building.
5.6 Programmes for providing protection for individual items can do much to extend the life of materials and can be implemented at a comparatively lower cost. Items can be cleaned and wrapped, or put in envelopes and boxes, made from acid free paper. This will reduce the amount of light exposure on an item, protect it from dust and dirt and prevent damage caused by removing and reshelving. Where resources are limited such a programme could be confined to those items in greatest need of protection either because they are rare or because they form a valuable part of the collection and must be retained in a usable condition.

5.7 Wherever systems are installed to control temperature, humidity, lighting or pollution levels, staff must be assigned to check and monitor them on a regular basis. The staff concerned must be instructed in the action to be taken if conditions do not meet the standards set, or must know who they can refer to who will initiate appropriate action.

5.8 Before embarking on a preservation programme it will be necessary to have a detailed knowledge of the conditions under which items are being stored. This will include the type of shelving in use and the environmental conditions such as temperature, lighting and humidity. A survey of the storage conditions will point to areas where lighting levels may be too high or where temperature or humidity levels are unacceptable. This information can be used to plan storage for very valuable items or those at low risk or of short term use where environmental conditions can be allowed to deviate from the standards required for long term preservation.

5.9 A survey should be carried out to assess the physical condition of items in the collection. The purpose of a survey is to examine the collections and determine the amount, and type, of conservation work needed. A survey will give a general indication of the physical condition of bindings and paper. By surveying items at random from various locations around a building the results will highlight problem areas where conditions such as damp, light damage or mould infestations are prevailing. Appendix II describes the methodology for carrying out a survey of the collection.
5.10 Although there is a pressing need for most libraries and archives to take some action to implement a preservation programme, the vital stages of information gathering and planning must not be ignored. Determining a collection management policy, allocating resources and setting priorities is essential to the success of a preservation programme. It is better to set out to preserve part of the collection and ensure its continued usefulness than to neglect an entire collection through a perceived lack of sufficient resources.

6. CO-OPERATION

6.1 When institutions lack the resources needed for a comprehensive preservation programme managers need to consider alternative means of funding a programme or seek ways of extending the value of the resources they do have. For many organisations additional funding through sponsorship or grants from trusts and charities may be available. Cooperation between organisations can provide a means of rationalising the use of resources and of deriving a greater benefit from those which are available.

6.2 There are two ways in which organisations can co-operate to ensure a more effective means of preserving their collections. The first is by practical help to provide additional resources or expertise and the second is by sharing responsibilities and information about activities which will prevent unnecessary duplication. Both of these will make better use of the resources available and can form an integral part of a preservation policy.

6.3 It is possible to organise contingency plans which draw on trained staff from other areas to help. At local level many small public or special libraries or archives have insufficient staff to form an effective disaster recovery team. The organisation of a regional force of trained people would provide a more effective means of responding to an emergency.
6.4 Similarly, it should be possible to organise the purchase and storage of recovery materials at a regional level for distribution as required. Organisations affiliated to larger bodies such as governments, universities or public authorities may be able to draw on equipment and supplies held centrally rather than relying on purchasing and storing in-house stocks which are a drain not only on financial resources but scarce storage space.

6.5 Co-operation of this kind relies on the establishment of a core of local knowledge and on individual resourcefulness in locating possible facilities and sources of help.

6.6 Within the USA and the UK there has already been some progress in establishing a means of sharing information. Each country has established a database of information about published material which has been microformed as part of a preservation programme. The National Register of Microform Masters in the USA and the Register of Preservation Microforms in the UK, both contain bibliographic records and descriptions of the microforms made of the originals.

6.7 The availability of this information enables libraries to purchase microform copies of items held in their own collections thereby eliminating their own expenditure in filming and processing a master negative. The success of these Registers will depend on their widespread availability and the reliability and currency of the information they contain.

6.8 These national programmes rely on participants adhering to an agreed set of standards both for microform production, which will ensure their archival value, and for storage conditions which will guarantee their longevity.

6.9 The availability of on-line databases of bibliographic records offers further scope for the dissemination of information about the physical state of individual items and the conservation treatments applied to them.
6.10 The materials and techniques for conservation have improved greatly, partly due to necessity following the Florence flood of 1966 and partly due to advances in paper chemistry. Few archives or libraries are able to carry out a large scale research programme but research is necessary if greater improvements are to be made.

6.11 There are several ways in which cooperation can assist advancements in conservation techniques: co-operation between conservators and manufacturers/suppliers of material and equipment; co-operation with university or government research departments to develop new techniques or to apply existing knowledge to conservation problems; and co-operation between major institutions for the research, development and testing of new techniques. Above all, the publication of research is essential to ensure the effective dissemination of information throughout the profession.

6.12 As with all forms of co-operation there must be perceived mutual benefit to provide the impetus for action and an acceptance of responsibility for maintaining accurate and up-to-date information. With the development of preservation policies will come a better understanding of the range and level of the problems and an acceptance of the scarcity of resources to address them. At this stage, the perception of the benefits of co-operation will become more apparent and this should provide the incentive necessary for action.

7. SUMMARY

7.1 There are two main areas of cost in the maintenance of a library. The initial cost of acquisition and the ongoing cost of storage and preservation. Generally the cost of storing and preserving an item over its lifetime will far exceed the initial purchase price paid. Archives often do not incur acquisition costs as documents are transferred from the parent organisation in accordance with the records management policy. However, costs of review,
7.2 Storage space, the maintenance of a controlled storage environment, security, cleaning, conservation work and the other aspects of a preservation programme described in Section 4, all cost money. The decision to acquire material and to retain it for a specified, or unspecified, period requires a recurrent preservation budget able to meet the needs of the material as defined in the preservation policy.

7.3 A decision to acquire and retain an item within a collection will usually be based on one of the following premises:

(i) the item is of value to users;

(ii) the item is part of the national heritage;

(iii) the item is an integral part of the overall collection.

As discussed in Section 3, the management policy will determine items to be acquired for the collection and define their period of retention.

7.4 The resources available for implementing a preservation programme will affect the decision taken when formulating the management policy. Many institutions, lacking the resources to acquire and retain material in a wide area, will have to examine their collections and be more selective about the types of materials they acquire and store. For some institutions, such as research libraries specialising in a specific subject area, or a company archive, defining the scope of the collection more precisely is not too difficult - it often means the elimination of more general reference material or of material of an inappropriate academic level. However, for a national library or record office, or a large research library covering a range of subjects, this can be a very difficult task.
7.5 Many libraries in the USA and the UK have adopted the Conspectus methodology for assessing areas of strength within collections. Such knowledge enables librarians to build on areas of strength and limit acquisitions in other areas. However, few librarians take such decisions lightly and the problems of what to retain and what to dispose of will continue to trouble the profession.

7.6 Few institutions can provide the same level of care, security and attention to all items. Items should be categorised and assigned a priority status according to value, use and preservation need so that the preservation programme can meet the objectives of the collection management strategy.

7.7 Programmes for boxing, binding, substitution, conservation and other active treatments must be appropriate to the items and their needs. Decisions should be made concerning those items which can be substituted with surrogates, those which must be given full conservation treatment as required and those which need to be given added protection, such as boxing, but for which more permanent treatments are not deemed necessary. These decisions and priorities must be assigned as part of the overall management strategy and reflected in the preservation policy.

7.8 The activities within a preservation programme fall into three categories:

(i) prevention - maintaining a good physical environment with controlled temperature, humidity, atmosphere; cleaning the building and items to remove dust and dirt; user and staff training for correct care and handling; maintaining security;

(ii) protection - boxing, binding or making surrogates of vulnerable material;

(iii) treatment - conservation.

These activities are not mutually exclusive or exhaustive and some could be carried out in one or more categories.
The resources assigned to a preservation programme, in terms of staff, finance and materials, will affect the measures which can be introduced. Where resources are limited it will be necessary to readjust the programme to provide the best possible protection with the money, staff or equipment available. Where money is not available for full conservation treatment, a surrogate might be cheaper and thus reduce the level of wear and tear on the original. Boxing an item can add time to its useful life by giving added protection in storage and whilst it is being transported between shelf and reading room.

The readjustment of priorities can be undertaken on a broader level within the management strategy. Materials lent to users are at more risk of damage than those available for reference only within the institution. Removing more items from the loan collection can reduce the need for conservation or re-binding. Acquisition departments should consider the purchase of original materials; for example, hardbacked books generally cost more to purchase than paperback ones but they are more hard wearing and less likely to need protection later.

Balancing budgets, assigning priorities and allocating resources are not easy tasks; they cannot be undertaken by individual parts of an institution without due regard for the effect of such decisions on other activities. It is essential to have a well defined collection management policy and a preservation policy which reflects the management strategy and includes a clear statement of priorities. However, the funding of the preservation programme must be adequate to enable it to meet the needs. If it isn't, the preservation policy must be reviewed in line with the overall collection management policy.

To be effective, a policy must reflect the current activities of the organisation and remain consistent with its aims and objectives. Although a policy sets out to establish a programme with long term and far reaching aims, this will not preclude its revision and updating in line with changes within the institution and developments in technology and conservation practice.
8. READING LIST

This reading list has been compiled to assist readers in assessing their preservation needs and to supplement this study for the preparation of a preservation policy.

8.1. Journals

Most of the professional journals for librarians and archivists will include some coverage of issues relating to preservation. The journals listed here are those which deal exclusively with preservation; from the broad issues relating to preservation management to specific programmes for conservation. They will serve as general interest and reference material for staff devising management programmes and most include details of new publications, meetings and training courses.

Conservation Administration News
ISSN 0912-2912 Quarterly
University of Tulsa Libraries Tulsa Oklahoma USA

International Preservation News
ISSN 0890-4960 Quarterly
National Preservation Program Office Library of Congress
Washington DC 20540 USA

Library Conservation News
ISSN 0265-041X Quarterly
National Preservation Office British Library
London WC1B 3DG UK

National Preservation News
ISSN 0882-4339 Occasional
National Preservation Program Office Library of Congress
Washington DC 20540 USA

The Abbey Newsletter
ISSN 0276-8291 Bimonthly
Preservation Department Brigham Young University Library
Provo Utah 84602 USA
8.2. General

The references listed here have been selected because they refer directly to the preparation of a preservation policy or to the implementation of a programme, or because they consider the issues which are pertinent to the development of such policies and programmes.

Atkinson RW
Selection for preservation: a materialistic approach
Library Resources and Technical Services 1986 30 (4) pp 341-353

Banks JM
Guidelines for preventive conservation

Child MS
Further thoughts on "Selection for preservation"
Library Resources and Technical Services 1986 30 (4) pp 354-362

Clark Morrow C
A conservation policy statement for research libraries
University of Illinois Graduate School of Library Science
Occasional Papers No 139 1979 ISSN 0073-5310

Clark Morrow C
The preservation challenge: a guide to conserving library materials

Clements DWG
Preservation and conservation of library and archival documents:
A UNESCO/IFLA/ICA enquiry into the current state of the world's patrimony
UNESCO Paris 1987

Cunha GM
What an institution can do to survey its conservation needs
New York New York Library Association 1980
Cunha GM and DG Cunha
Library and Archives Conservation: 1980s and beyond
Scarecrow Press Inc New Jersey and London 1983
(Volume II contains a comprehensive bibliography in all subjects concerned with preservation)

Darling PW
Creativity v Despair: the challenge of preservation administration In: Lundeen G (ed) Conservation of Library Materials Library Trends 1987 30 (2)

Darling PW
Preservation planning program Resource Notebook 1982
Association of Research Libraries Office of Management Studies Washington DC USA

Darling PW and DE Webster
Preservation planning program An assisted self study manual for libraries Expanded 1987 edn
Association of Research Libraries Office of Management Studies Washington DC USA

Dean J
Conservation and collection management
Journal of Library Administration 1986 7 (2/3) pp 129-141

Dureau JM and DWG Clements
Principles for the preservation and conservation of library materials
IFLA Professional Reports No 8 1986

Foxon DF
Book conservation priorities: a bibliographer's view
In: Petherbridge G (ed) Conservation of library and archive materials and the graphic arts pp 221-225 Butterworths 1987

Goodair C and C Jackson
Developing a preservation policy for the Children's Society Library Association Record 1988 90 (10)
Govan JF
Preservation and resource sharing: conflicting or complementary?
IFLA Journal 1986 12 (1) pp 20-24

Gwinn NE (ed)
Preservation microfilming
American Library Association 1987 ISBN 0838904815

Gwinn NE and PH Mosher
Coordinating collection development: the RLG Conspectus
College and Research Libraries 1983 44 (2) pp 128-140

Hanger S
Collection development in the British Library: the role of the RLG Conspectus
Journal of Librarianship 1987 19 (2) pp 89-107

Hubbard WJ and KW Langston
Rx for library materials: the holistic approach
Library and Archival Security 1984 6 (4) pp 17-26

Jensen CW
Developing a conservation policy: the Harold B Lee Library
ISBN 0408014660

Jollife J
International cooperation in preservation
Collection Management 1987 9 (2/3) pp 113-118

McCleary JM
Vacuum freeze-drying, a method used to salvage water-damaged archival and library materials: a RAMP study UNESCO Paris 1987

Merrill-Oldham J and M Smith (eds)
The library preservation program. Models, priorities, possibilities
American Library Association 1985
Oberg LR
Evaluating the Conspectus approach for smaller library collections
College and Research Libraries 1988 49 (3) pp 187-196

Pascoe MW
Impact of environmental pollution on the preservation of archive and records: a RAMP study UNESCO Paris 1988

Ratcliffe FW assisted by D Patterson

Smith MA (ed)

Smith MA
The IFLA core programme on preservation and conservation (PAC) IFLA Journal 1986 12 (4) pp 305-306

Swartzburg Susan G

Tomer C
Selecting Library Materials for Preservation Library and Archival Security 1985 7 (1) pp 1-6

Wilson A
The bell has tolled twice: what public libraries should do about the preservation effort In: Prospects for British Public Libraries Proceedings of the Public Library Authorities Conference 1985 pp 21-26
Wilson A
For this and future generations. Managing the conflict between conservation and use
Library Review 1982 31 (3) pp 163-172

Wood Lee M
Prevention and treatment of mold in library collections with an emphasis on tropical climates: a RAMP study UNESCO Paris 1988

Preservation of library material
A report of the Collection Preservation Committee
University of Toronto Library 1984

Preservation microforms
National Preservation Office British Library London WC1B 3DG UK

Preservation: A survival kit
National Preservation Office 1987
National Preservation Office British Library London WC1B 3DG UK

Library Association Publishing 1987 TSRNO853658471
8.3 Disaster Control

The following publications are concerned with the preparation of contingency plans and recovery programmes.

Anderson H and JE McIntyre

Barton JP and JG Wellheiser (eds)
An Ounce of Prevention: A Handbook on Disaster Contingency Planning for Archives Libraries and Record Centres
Toronto Area Archivists Group 1985

Buchanan SA
Disaster planning: preparedness and recovery for libraries and archives. A RAMP Study with guidelines. Bibliography by Toby Murray. UNESCO Paris 1988

England C and K Evans
Disaster Management for Libraries: Planning and Process
Canadian Library Association 1988

Morris J
The Library Disaster Preparedness Handbook
American Library Association 1986

Tregarthen-Jenkin I
Disaster Planning and Preparedness: An Outline Disaster Control Plan British Library Information Guide 5 1987
ISBN 0712331034 British Library London W1V 4BH UK

If Disaster Strikes!
The preparation of contingency plans and salvage procedures
VHS Video National Preservation Office 1988
National Preservation Office British Library London WC1B 3DG UK
APPENDIX I
SECURITY OF COLLECTIONS

The prevention of loss, theft or damage of collections is part of the responsibility of the preservation policy. (Section 4.5)

The following guidelines, reproduced by permission of Dureau and Clements (1), should be considered as part of the planning process for a preservation policy. There will be instances where libraries and archives do not own their buildings and are tenants of other organisations. In such cases the extent to which a building may be modified will be limited by the terms of the tenancy agreement. However, there is much which can, and should be done, to provide good conditions of security. In cases where new buildings are being planned requirements for security and disaster control should be incorporated into the structure of the building.

FIRE

1. Fire is a major hazard and many precious collections in the past have been badly damaged or destroyed through fire. Adequate protection against fire begins with the architectural design and building of the library. Design features such as large open spaces and ornamental staircases which will act as chimneys for the spread of fire should be avoided. Adequate fire doors and fire breaks must be installed, and the spread of fire through ducting for electrical wiring and electrical services should be minimised by siting such services outside the storage accommodation for the library collections. Emergency exits for library staff and readers should not permit unauthorised access or access to the collections. Local and national laws will affect such planning.

2. Materials used, either in the building or equipment, of libraries should be non-flammable and should not give off toxic fumes or smoke which might harm readers or damage library materials.

3. Fire detection devices and/or alarms should be installed and should be regularly maintained and checked. They should be audible to all members of staff and readers who should understand the alarm signals. There should be emergency power supplies to such systems in case fire damages the main electrical supply source.

4. Sources of fire within a library should be reduced as far as possible; but those present should be listed and
regularly checked (e.g. electrical wiring, lighting and power connections, chemicals in workshops or laboratory accommodation, reprographic and/or photographic machinery, staff or public kitchen facilities).

5. Static and portable appliances for fighting a fire should be provided throughout the library and should be well marked and conveniently sited. Staff should be instructed regularly in their use and in other fire procedures. Such appliances should be tested and filled regularly and should preferably be of an appropriate kind (e.g. powder and not liquid or gaseous, to avoid damage to library collections). However, professional fire-fighting organisations should advise on the provision and nature of these appliances.

6. It may be impossible to prevent readers and members of library staff from smoking in the library building, although this should be strenuously discouraged. If smoking is allowed, smokers should be segregated in attractive accommodation with numerous and convenient ashtrays and other receptacles to deposit cigarette butts. Smoking and non-smoking areas should be clearly signposted. Smoking should not be allowed in storage areas. Smoking areas should be regularly checked by staff during open and closed hours in case of any outbreak of fire.

7. In case of serious fire, staff should clearly understand the procedures and summon professional fire-fighters to the outbreak as quickly as possible and organise the evacuation of members of library staff and readers. Firefighting staff will need a map of the library. It will be prudent for large libraries to consult professional fire-fighting staff regularly so that they are familiar with the building and its problems.

WATER

8. Water damage is often potentially more dangerous to libraries than damage from fire. It can arise from damage to pipes carrying main water or sewerage supplies, central heating or air conditioning connections, externally from water seepage up walls, blocked gutters, or through damage to roofs, glass windows, etc. Water damage also invariably results from efforts to fight any fires and can be more extensive than the damage directly caused by the fire. Many of these causes can be avoided by regular planned building maintenance and others avoided when preparing the architectural specification for a new building (e.g. drainage sumps should not be located in storage areas).

9. When library materials have been damaged by water, the librarian has first to arrest the damage and then where
possible repair it. To arrest damage by water can be done by air drying in the traditional manner, or by accelerated deep freezing. It is prudent for large libraries to identify convenient local commercial resources for this latter treatment. In any case the availability of de-humidifying equipment ought to be identified. Special recovery treatments will be required for photographic and other special library materials that have been damaged by water and appropriate technical advice should be sought.

WAR AND NATURAL DISASTER

10. Either eventuality implies a catastrophe and circumstances difficult to forsee. However, the librarian should devise and clearly set out contingency plans against such disasters. Libraries situated in zones liable to suffer earthquakes need to plan architectural strengthening of their buildings and the possible consequential damage through fire and/or water. Outbreak of war may necessitate planning for the removal of library collections to safer conditions.

THEFT

11. Effective planning against theft begins with the design of the library building so as to minimise unauthorised access through doors, windows, mechanical services ducting, sewers, etc. Successful security at the perimeter of the library building will prevent many thefts. Within the building, unauthorised entry to sections of the library not open to readers must be secured by means of locks, physical checks of identity and other controls. Members of library staff must also be properly identified and, if necessary, carry security passes at all times. Readers in the library should also, where necessary, be properly identified and carry tickets authorising their entry into the library building and their entitlement to consult library materials. Record files for both readers and library staff must be strictly maintained up-to-date and in a secure location. Reading rooms need to be supervised, especially those used for the consultation of rare and precious books. Library materials must be marked in such a way as to indicate the library's ownership or custodial standing. Readers should not be allowed to bring coats and bags into reading rooms and there should be a physical check at the library exits. Entrances and exits for readers should be as few as possible.

12. Librarians should consider the installation of fixed, permanent intruder or pressure alarms for use during the library's closed hours. For larger libraries in addition
to these alarms there may be a need for regular security patrols by special security staff linked to local police officers.

13. Most major libraries allow for an annual system of checking the contents of the book stacks as a way of ensuring items have been correctly re-shelved and identifying any items that may have gone missing. Mis-shelving returned items is the commonest cause of apparently missing items but such stock checks also serve to identify possible cases of theft.

References

1. Dureau JM and DWG Clements
Principles for the preservation and conservation of library materials
IFLA Professional Reports No 8 1986
APPENDIX II

CONSERVATION SURVEY METHODOLOGY

Surveying a collection can be an enormous task but the work will be assisted by breaking down the collection into discrete units divided as convenient by categories such as call number, subject or location. The results should be analysed for each unit and then cumulated over the collection as a whole. In analysing results any correlations should be noted: e.g. if there is a significant presence of damp or mould in one discrete unit, this may signify a problem with environmental conditions in that particular area. This will enable special treatments, such as the use of dehumidifiers, to be applied selectively.

Methodology

Few institutions will be able to examine each item, although this may be necessary in the case of a particularly valuable collection or heritage items. The methodology should select items at random throughout the collection to provide as fair an assessment as possible of the physical condition of items. The number of items selected will be determined by factors such as the size of the collection, the variety of material collected and, not least, the time available to carry out the survey and analyse the results. At its very simplest the survey might select the 'nth' item on the 'nth shelf' in alternate presses. More complex tables can be devised to introduce a greater randomness. (see table 1)

The data recorded at the shelf can include any information which the institution wishes to have; most usually it will include:

i) shelfmark, or identifier of the item
ii) date of publication
iii) country of publication
iv) number of pages
v) condition of the paper - this may include using a pH meter to measure acidity or using a 'fold test'(1) to assess brittleness
vi) condition of the binding

In (v) and (vi) the survey will record the presence of any physical damage or deterioration including tearing, dirt, insect or rodent infestation or cockling due to damp. A coding system of 'Good, Fair, Poor' could be introduced to indicate where conservation treatment is essential or where protection is needed either for the item itself, such as wrapping, or for environmental control, such as the use of blinds to reduce
sunlight which has faded bindings.

<table>
<thead>
<tr>
<th>Shelf Selection</th>
<th>Distance along shelf in cms</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)  (b)</td>
<td>(a)  (b)</td>
</tr>
<tr>
<td>2   10</td>
<td>25   10</td>
</tr>
<tr>
<td>3   6</td>
<td>35   0</td>
</tr>
<tr>
<td>8   5</td>
<td>80   45</td>
</tr>
<tr>
<td>7   4</td>
<td>100  90</td>
</tr>
<tr>
<td>1   9</td>
<td>65   40</td>
</tr>
<tr>
<td>6   3</td>
<td>100  60</td>
</tr>
</tbody>
</table>

Using two separate tables of random numbers a shelf is selected and then a volume along the shelf. To construct a suitable table for the institution use the number of shelves which make up a press (a set of shelves between two vertical uprights) and measure the maximum length of a shelf. The table here is for presses of 10 shelves with a maximum shelf length of approximately 100 cms.

To select items work along the shelves using the table. eg. In press 1 select shelf 2 and the item 25 cms from the left. In press 2 select shelf 3 and the item 35 cms from the left. If an item is not present, if say the shelf is not full or an item is on loan, move to the next press and continue. In press 3, shelf 8, take the item at 80 cms. Work on through the shelves using the table.

Use the shelf and distances in columns (a) together and the shelf and distances in columns (b) together.

(1) The fold test for assessing the level of brittleness of paper requires the corner of one page to be folded then folded back again through 360 degrees to make one double fold. Repeat this up to 5 times and record the number of folds on which the paper breaks. If the paper does not break record 5+ folds. Do not apply this test to volumes considered to be especially valuable, such as early or rare items.
References

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The Yale Survey: A large scale study of book deterioration in the Yale University Library
College & Research Libraries March 1985 pp111-132

Buchanan S and S Coleman
Deterioration Survey of the Stanford University Libraries Green Library Stack Collection
Stanford June 1979