Preservation Guidelines

Revised May 2013 and updated September 2015

Digital Library Board
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1. Introduction

The Preservation Guidelines highlight the importance of training and prevention in maintaining collections for both ready access and long-term research. Most of the general print collections are available for loan and this provides a challenge for the long-term preservation of material. Other challenges result from the lack of environmental controls in most Library buildings. However, there is a lot staff can do to minimise damage with a little knowledge and care.

Rare or expensive material is housed in the General Library’s temperature-controlled Special Collections where materials are consulted in a supervised reading room. There are also similar collections at other library sites including the Architecture Library, and the Fine Arts Library. A binding and mending programme contributes to the maintenance of the printed collections. Security systems have been installed to reduce theft.

a. Purpose

This document is intended to provide library staff with general guidance in dealing with library materials in all formats, to ensure the preservation of materials in their care as far as is practically possible, and in line with the retention levels for the collection concerned. This supports the Library’s Mission Statement, which implies a responsibility to maintain and preserve items consistent with their use and significance:

The University Library is committed to providing quality library and information services to support and enhance the teaching, learning, research, scholarship and creative work of the University.

These guidelines are applicable to all collections. Additional measures required for special collections and other rare or fragile items are noted under each sub-heading.

The websites of the British Library Preservation Advisory Centre, and the National Preservation Office of the National Library of New Zealand, provide excellent additional advice and are referred to throughout these Guidelines. Staff in the relevant sections of the Library, especially in Special Collections and Media Archives, should be consulted for advice on specific situations.

b. Audience

All Libraries and Learning Services staff.

c. Related documents

The following documents provide information on closely related issues:


Digitisation Activities: Best Practice Guidelines have an important impact on preservation of materials. [www.library.auckland.ac.nz/about-us/collections/digitised-collections](http://www.library.auckland.ac.nz/about-us/collections/digitised-collections)

The Collection Management Plan describes the collection, the balance between electronic and print resources, and includes subject specific collection development statements, and a statement on relegation and deselection [www.library.auckland.ac.nz/about-us/collections/collection-management](http://www.library.auckland.ac.nz/about-us/collections/collection-management)

Weeding Guidelines [library.intranet.auckland.ac.nz/docs/weeding-guidelines.pdf](http://library.intranet.auckland.ac.nz/docs/weeding-guidelines.pdf)
d. Retention levels

In most libraries material is not intended for permanent preservation, but applying preservation principles will help to ensure a reasonable life for collections. Materials in special collections are intended for permanent preservation and therefore have different requirements, justifying the separate sub-heading throughout these Guidelines.

e. Digital preservation

Electronic formats have altered the balance between print and other formats, and the choice of formats provides other options for high-use and fragile collections. However, the preservation of digital material poses new challenges, both in preserving the digital content and also in the retention of the associated hardware and software required to access the materials. Library-generated content includes its institutional repository, the University Research Repository, the Archive of Māori and Pacific Music, Chapman Archive, the Anthropology Photographic Archive, and Special Collections digital content: these are backed up through ITS-managed facilities and the National Digital Heritage Archive (National Library of New Zealand). For full details of specifications for this format see the Digitisation Guidelines.

2. Storage and accommodation

ALL COLLECTIONS

The essential elements for preservation are a stable environment, appropriate storage, and safe handling and copying practices. The environmental standards covering temperature and relative humidity, light levels, air quality, pest management, security and shelving are described in the following sections.

SPECIAL COLLECTIONS

Rare or expensive collection items should be held in environmentally-controlled conditions and consulted under supervision in a secure environment. The Reading Room in Special Collections is currently the only location that meets most of these requirements.

a. Temperature and relative humidity

ALL COLLECTIONS

Fluctuations in temperature and humidity are destructive to paper, and all formats need stable conditions. Paper requires a consistent temperature of 20 deg. C and 55 % relative humidity (RH). When the temperature rises above 23 degrees C and 65% RH, there is a high potential for mould growth. Higher temperatures combined with lower humidity can lead to embrittlement. The important factor is the maintenance of a stable environment, and limiting the range of fluctuation.1

The Library should monitor the storage and research environments for temperature and humidity and where air conditioning systems exist ensure that these work effectively.

SPECIAL COLLECTIONS

Areas where unique collections are housed should be monitored for temperature and humidity and any fluctuations beyond the defined range receive attention. Areas currently monitored are:

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b. Light

ALL COLLECTIONS

Light levels should be kept as low as possible as light causes fading and accelerates the breakdown of library materials. Ultra-violet (UV) light is the most damaging. The general guidelines are: no direct sunlight, light levels kept as low as possible, length of exposure kept as low as possible, and reduction of UV.

Measures to reduce light levels to a minimum level include fitting timers to light switches in low access storage areas, reducing the number of lights, particularly fluorescent lights, installing UV filters on lights, and window treatments such as curtaining, blinds and UV-resistant film.

For reading areas, a minimum level of 300 lux is necessary. See also 5 Exhibitions.

Special Collections has an ELSEC environmental monitor which measures both visible and UV light, and this can be borrowed as necessary.

Scanning and photocopying can produce unacceptably high exposure to light. Copying or scanning of fragile material should be limited and closely monitored. See also 4 Copying.

SPECIAL COLLECTIONS

For reading areas, a minimum level of 300 lux is necessary. See also 5 Exhibitions.

c. Air quality

ALL COLLECTIONS

Atmospheric pollutants, both gaseous and solid, cause damage to library materials through chemical reaction, disfigurement and abrasion. Ideally a filtered air-conditioning system is the best way to control air pollution, but at present only Special Collections meets this standard.

The General Library’s lack of air-conditioning results in a high level of atmospheric pollution such as dust and traffic fumes, made worse by the open windows in the building. An effective and regular cleaning programme is essential for reducing the deterioration caused by airborne pollutants. See also 6 Collection Maintenance.

d. Pest management

ALL COLLECTIONS

The main biological pests are moulds, insects and rodents. In Auckland, silverfish present the most common pest problem in libraries, thriving in dark areas especially. The other major threat is mould, which can proliferate when temperatures are above 20°C and relative humidity over 70%, and where light levels are low. The most effective control measures are:

- Regulation of temperature, relative humidity, light, and airflow.
- Regular cleaning.
Regular inspections of the building to detect and eliminate pests.

Freezing: it is preferable to treat potentially infected stock off-site by freezing for at least two weeks before it is integrated into the collections. This will kill most insect pests and their eggs. Freezing facilities for small quantities of material are available at the School of Biological Sciences (contact Craig Millar cd.millar@auckland.ac.nz).

Fumigation (last resort). On site fumigation may be necessary but it must be conducted by qualified applicators such as Rentokil who can also undertake monitoring and treatment on a regular basis, as in Special Collections.

SPECIAL COLLECTIONS

Monitor collections for mould every three months. This is best done with the lights off using a small LED torch. If mould is found, remove material for cleaning.


e. Security

ALL COLLECTIONS

Security will prevent or minimise the risk of damage from theft and vandalism.

SPECIAL COLLECTIONS

Theft and damage is greatly reduced through a controlled access reading room. Vandalism or theft may be further reduced through the use of closed circuit television.

f. Shelving

ALL COLLECTIONS

Books should be stored out of direct sunlight and where air can circulate freely.

Shelving should not be placed near windows or against outside walls to avoid condensation and temperature changes.

Coated metal shelving should be used. Ideally books should not come into contact with unsealed wood which can release acidic vapours. Any such shelves should be lined with acid free board to prevent this problem.

Bookends should be used to prevent books collapsing.

Books more than 500mm (20 in) high should be stored flat. Outsize sequences should be maintained so that books are stored flat rather than on their spines.

3. Handling Library materials

Library materials should be protected from dirt, water, food and drink, direct heat and undue physical stress. Careful handling can contribute significantly to the longevity of the Library’s collection. Regular training in careful handling should be provided for all staff, and readers encouraged to follow the basic handling techniques outlined below.
ALL COLLECTIONS

Books and printed material

- Hands should be clean and free of creams and lotions.
- Do not eat or drink in collection areas.
- Avoid using post-it notes and remove before shelving.
- Remove acid flags such as lending receipts before shelving.
- When shelving books, don't shelve them too tightly. If necessary, use bookends of a size appropriate to the books to stop them slumping.
- When removing a book from a shelf, don't pull it out by the top lip of the spine. This will eventually result in the upper spine tearing. Push the books on either side deeper into the shelf so that you can grip the book firmly enough to remove it.
- No more than three books or one large volume should be carried at a time. Larger, heavier items should be placed at the bottom of the pile. Large volumes should be carried flat against one's side or chest with both hands positioned under the spine.
- When moving more than a few items, use trolleys or boxes to minimise wear and tear.
- Remember $120^\circ$ is the maximum recommended opening angle for most books, and pressing down on bindings often causes damage.
- Don't use pressure-sensitive tape such as sticky tape, masking tape or adhesive cloth tapes to try and repair a book.


Audiovisual material

- **CDs and DVDs**: discs are easily damaged by poor handling, and should be kept in their jackets or enclosures when not in use. Handle them by the edge or centre hole, and do not bend or flex. Do not write on or apply labels to archive copies of discs.
- Further reading: Caring for CDs and DVDs [www.bl.uk/blpac/pdf/cd.pdf](http://www.bl.uk/blpac/pdf/cd.pdf)
- **Magnetic tapes (Audio, video, and computer)**: tapes should be kept away from magnetic fields and heat sources. They should not be stacked or touched with the fingers. High humidity should be avoided as mould can grow on the tape.
- Further reading: Sound Recordings [natlib.govt.nz/collections/caring-for-your-collections/sound-recordings](http://natlib.govt.nz/collections/caring-for-your-collections/sound-recordings)

Photographs

The long-term preservation of photographs depends on three factors: the type of photographic process (black and white, colour, slide or print), how well they were processed, and the way in which the photographs are stored and handled.

- The surface of a print or film should never be touched with the fingers as skin oils and salts will cause permanent damage.
• Clean cotton gloves should be worn while handling photographs, or hands washed and items handled by the edges only.

• Further reading: Photographic material www.bl.uk/blpac/pdf/photographic.pdf

SPECIAL COLLECTIONS

Rare and special materials are intended for permanent preservation because of their uniqueness, rarity or monetary value, and require more exacting storage conditions and handling procedures. The following should be applied in addition to the general handling advice above:

• Handle materials with care.
• Ensure hands are kept clean.
• No food and drink in the reading area.
• Use 2B pencils when working with the materials.
• Cotton gloves will only be issued if the materials require them eg photographs and negatives, art works and textiles.
• Use book supports and snake weights for large volumes or tight bindings.
• Bound volumes should be handled with particular care, as older bindings often have weak joints. Books with tight bindings should only be opened to 90 degrees.
• Do not wet your fingers to turn pages
• Support large paper items such as posters when carrying.
• Store archival material flat and not folded whenever possible.
• Do not rest on original materials when taking notes.
• All requests for copying are assessed by staff on a case-by-case basis, and scanning and copying equipment appropriate to the materials should be used (see 4 Copying). Special Collections reserves the right to refuse to copy any material which may be damaged in the copying process.
• Where the original material is not suitable for regular use, (e.g. rare or fragile items or material in special formats such as sound tapes), the Library should use surrogates for reference, rather than originals. Subject to copyright and other rights, surrogates may be created through digitisation, microfilming, photocopying, photography, transcription, video and optical discs, or other technologies. But the surrogates do not obviate the need to retain originals in special collections, where the physical format and artefactual value is of equal importance to the intellectual content.

a. Materials in transit

ALL COLLECTIONS

Material should be transported in a box, or on a book trolley, to avoid damage.

Trolley shelves should be wide and wheels of large diameter. Trolleys should not be overloaded.
SPECIAL COLLECTIONS

Valuable and fragile material should be enclosed in a padded envelope or enclosure.

4. Copying

ALL COLLECTIONS

Digital scanning and photocopying are major sources of damage to printed materials, primarily through poor handling and heat and light generated by machines. Forcing books open to 180° can result in much damage over time.

Readers should be encouraged to minimise damage where possible.

SPECIAL COLLECTIONS

Restrictions should be applied to the copying of at-risk materials. Staff should assess requests for copying in line with preservation principles, and if necessary apply the Special Collections handling guidelines (see 3 above).

For particularly fragile items an overhead scanner or digital camera should be used.


5. Exhibitions

SPECIAL COLLECTIONS

Book cradles and cushions should be provided for the display of rare bound volumes. Facsimiles or surrogates should be used for display when security is uncertain. For display of sensitive items over a period of time, maintaining a light level of around 50 lux is necessary to prevent fading.

Material should not be placed on permanent display.

Material may be made available for external exhibitions in accordance with the conditions of the Special Collections Loan Agreement.


6. Collection maintenance

ALL COLLECTIONS

All staff and users can contribute to a successful preservation strategy through safe handling and awareness of appropriate conditions for collection storage and use.

a. Cleaning

All areas should be cleaned regularly to help prevent the deterioration of materials. Cleaning reduces dust, which causes mechanical damage and acid deterioration, and provides nutrients for biological pests.
b. Monitoring

The condition of the collections should be reviewed on an on-going basis. In the event that individual items are identified as damaged, action should be taken to replace, treat, or reformat them.

c. Processing

Details are available in the Processing Handbook, available in the Cataloguing Department.

Materials used in Library processing should be archival where appropriate. The use of metal paperclips and fasteners for long-term storage should be avoided. Sellotape or rubber bands should not be used. Containers such as boxes, sleeves, wrappers and enclosures should be used to protect relevant items.

Material in Special Collections has more specific guidelines.

d. Binding

The University Bindery assists the Library to preserve and maintain the print collections by using the most suitable methods of binding and conservation. Periodicals available only in print format will have their component issues permanently gathered together into a bound volume, thus facilitating access and reducing loss. Heavily used and damaged stock will be rebound. The Lumbeck binding system (single sheets adhered to each other and bound flush to the foot) is used.

e. Training and disaster preparedness

Safe handling guidelines should be incorporated into the orientation process for all new staff. In addition staff should have preservation training on specific subjects, and disaster preparedness should be referred to in this process. Each location should have a representative on the Disaster Preparedness Working Group.

The Disaster Preparedness Plan should be consulted for advice about responding to damage to the collections. The Disaster Preparedness Working Group is responsible for ensuring that contingency plans are in place to prevent, react to and recover from damage to library collections as a result of emergency situations.

7. Reformatting for preservation

Photocopying, microfilming and digitisation contribute to preservation by making surrogates available and allowing originals to be withdrawn from use. The Anthropology Photographic Archive and the Western Pacific Archives microfilming projects are good examples of reformatting projects. These processes are included in the Library's Digitisation Activities: Best Practice Guidelines. However, for materials in Special Collections, the originals must also be preserved and care must be taken to ensure this in the reformatting processes.

8. New buildings

New buildings should meet the requirements for best practice in preservation and security measures, particularly regarding environmental controls.
9. Bibliography

ANSI/NISO/LBI Z39.78-2000 Library binding (ISSN 1041-5653)


National Preservation Office (NZ). Caring for your collections. natlib.govt.nz/collections/caring-for-your-collections
