



**NATIONAL ARCHIVES OF AUSTRALIA**

# **National Archives of Australia Standard for the Storage of Non- digital Archival Records**

Version 2.1 February 2018

## **DOCUMENT CONTROL**

---

<b>Title of Document</b>	<b>National Archives of Australia Standard for the Storage of Non-digital Archival Records</b>
Proposed review date	<i>Scheduled periodic review. Next Review December 2021</i>

## Contents

1.	<b>INTRODUCTION</b>	<b>5</b>
	<b>1.1 Purpose</b>	<b>5</b>
	<b>1.2 Scope</b>	<b>5</b>
	<b>1.3 Background</b>	<b>Error! Bookmark not defined.</b>
2.	<b>FRAMEWORK</b>	<b>6</b>
3.	<b>RELATED POLICIES AND PROCEDURES</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
4.	<b>REVIEW AND UPDATE</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
5.	<b>ROLES AND RESPONSIBILITIES</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
6.	<b>APPENDIX 1 STORAGE PRINCIPLES</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
	<b>Principle 1: Location</b>	<b>6</b>
	<b>Principle 2: Facility design and construction</b>	<b>7</b>
	<b>Principle 3: Environmental control</b>	<b>8</b>
	<b>Principle 4: Shelving and packaging</b>	<b>9</b>
	<b>Principle 5: Accessibility</b>	<b>10</b>
	<b>Principle 6: Handling</b>	<b>10</b>
	<b>Principle 7: Privacy and Security</b>	<b>11</b>
	<b>Principle 8: Protection from disaster</b>	<b>11</b>
	<b>Principle 9: Monitoring and maintenance</b>	<b>12</b>
7.	<b>APPENDIX 2 RECOMMENDED TEMPERATURE AND HUMIDITY LEVELS FOR STORAGE OF COMMONWEALTH RECORDS OF ENDURING VALUE</b>	<b>13</b>
8.	<b>APPENDIX 3 MAXIMUM LIMITS TOLERANCE FOR AIR POLLUTANTS FOR ALL PHOTOGRAPHIC RECORDS, ALL AUDIOVISUAL RECORDS AND RECORDS TO BE KEPT LONGER THAN 30 YEARS (FROM ISO 11799)</b>	<b>15</b>
9.	<b>APPENDIX 4 RECOMMENDED SHELVING AND PACKAGING FOR ARCHIVAL RECORDS</b>	<b>16</b>
10.	<b>APPENDIX 5 NAA STANDARD FOR STORAGE CONTAINERS FOR ARCHIVAL MATERIAL</b>	<b>18</b>
	<b>General storage (files, binders, documents, photographs)</b>	<b>18</b>

	<b>Outsize or unusually shaped items</b>	18
	<b>Maps, plans, charts and posters</b>	18
	<b>Audiovisual material (motion picture film, magnetic media) and microfilm</b>	18
	<b>Still film (photographic negatives, transparencies)</b>	18
11.	<b>APPENDIX 6 SECURITY REQUIREMENTS FOR PROTECTIVELY MARKED RECORDS.</b>	
	ERROR! BOOKMARK NOT DEFINED.	

## 1. INTRODUCTION

The *National Archives of Australia Standard for the Storage of Non-digital Archival Records* is part of a suite of plans and procedures outlined in the *National Disaster Preparedness and Recovery Strategy* (NDPRS) to ensure a nationally consistent approach to disaster management relating to archival records. In combination, these plans and procedures aim to ensure that damage to records in the Archives' custody is prevented or minimised and staff are aware of their roles and responsibilities.

### 1.1 Purpose

The purpose of this standard is to mitigate the risk of damage to archival records through improper storage. Record storage is a vital component of good records management. Appropriate storage – which takes into account the format and retention period of records - helps ensure that records survive as long as they are required for business and accountability purposes.

### 1.2 Scope

The standard is designed to:

- Set out the requirements for the safe storage and preservation of non-digital records in the Archives' custody.
- Ensure all non-digital records are protected, secure and accessible for as long as they are required to meet business and accountability needs and community expectations
- Ensure all non-digital records are stored in the most cost-effective manner possible

The standard is a code of best practice, and provides a tool to support and improve the storage and management of Commonwealth records.

The standard applies to the following forms of physical records:

- Paper files and documents
- Volumes and registers
- Maps, plans and drawings
- Photographic material, including black and white photographs and negatives, colour photographs and negatives, slides, transparencies, cine films, x-rays and microforms
- Magnetic media, including computer tapes and disks, videotapes, audiotapes
- Optical media, including laser discs and compact discs.

The standard excludes electronic records held on servers or in a data centre.

This Standard is reviewed and updated every three years.

## 2. Storage Principles

The standard outlines nine principles for the storage of non-digital records as listed in the table below.

1	Location	Storage facilities are conveniently located and not near known hazards
2	Facility design and construction	The design and construction of storage facilities protect and preserve the records.
3	Environmental control	Records are stored in environmental conditions appropriate to their format and retention period
4	Shelving and packaging	The shelving and packaging of records provide protection from damage and slow deterioration
5	Accessibility	Records can be easily identified, located and retrieved
6	Handling	Records are retrieved, handled and used in a manner that prevents damage and slows deterioration
7	Privacy and security	Storage conditions ensure the privacy and security of the records
8	Protection from disaster	Disaster management programs are established and maintained to minimise risks
9	Monitoring and maintenance	The storage facilities are monitored, managed and maintained to ensure the ongoing safety of stored records.

### Principle 1: Location

Storage facilities are conveniently located and not near known hazards.

When selecting a site, careful attention should be paid to orientation, landscaping, and the site's microclimate.

Requirement	Explanation
The site location is convenient to user needs	Records storage facilities should not be in remote locations, which may hinder monitoring, retrieval and access in the case of an emergency.
The site is located away from natural and man-made hazards	<p>Ideally, facilities should be located adjacent to compatible businesses, in such locations as a light industrial area, a technology park or a warehouse estate.</p> <p>The site should not be near:</p> <ul style="list-style-type: none"> <li>- flood plains, creeks, rivers or stormwater drains that are prone to flooding</li> <li>- bushfire-prone areas</li> <li>- land liable to subsidence</li> <li>- heavy industry such as oil refineries, chemical plants, paint or rubber factories, which may emit atmospheric pollutants or liquid contaminants, or bring risk of explosion</li> <li>- fuel depots</li> <li>- airports</li> <li>- industrial installations</li> </ul> <p>If any of these risks are present, they should be assessed. If mitigating</p>

	measures can reduce the risk, they should be put in place.
The site has good drainage	A location with good drainage reduces the potential for damage caused by heavy rain or runoff.

## Principle 2: Facility design and construction

### The design and construction of storage facilities protect and preserve the records

The design and construction fabric of a storage building provides the main protection for the records stored within. The building foundations, exterior and load bearing walls, floors, columns, windows and roof decking should all be designed with a high level of durability and longevity.

Requirement	Explanation
The building is constructed of appropriate materials, and is well-insulated	The building should be designed to provide an accurate and stable internal environment, with minimum dependence on mechanical systems. This can be achieved in part by constructing the external walls, roof and floor of the building from materials with a high thermal capacity (brick, stone, reinforced concrete), that insulate the interior from external climatic changes.
The building's roof is pitched sufficiently to allow rainwater runoff	Flat or gently-pitched roofs may cause pooling. A sufficient roof pitch ensures rapid rainwater run-off. Recommended roof falls: Metal: 2° Corrugated iron: 5° Tile/other: 18°
The building's guttering and down pipes are external, high capacity, and well-maintained	A well-maintained drainage system prevents water overflow or blockages.
The storage facilities are entirely weatherproof and sealed	Appropriate sealing in storage areas will protect records from dust, moisture, and pest penetration and also help to stabilise external fluctuations in temperature and humidity.
Storage areas are dedicated to record, or record and library storage	Records that are not in active use should be stored in a dedicated storage area which is used only for records or compatible materials, such as library materials. Physical separation enables better access control and helps to maintain environmental conditions. Other parts of a storage facility may be used to store different types of goods, providing the records are not put at risk.
Storage areas are appropriate for the protective marking of the material	Storage areas constructed and monitored in accordance with the Australian Government Protective Security Policy Framework and its Physical Security Management Guidelines.
Storage areas are isolated from internal hazards	Internal hazards may include kitchens, washrooms, electrical plants, overhead pipes, and exposed plumbing, as well as potentially combustible materials such as chemicals. Such hazards in storage areas place records at risk.
The building and its services comply with Australian building codes and standards that applied at the time of construction	A building that does not comply with the appropriate building code may not be safe for records storage. Even if a building does comply with the code it may still be inappropriate for storing records – for instance, if the floor loading is not sufficient to carry the weight of stored records.

Storage areas have sufficient floor loading capacity (FLC)	Floors should be able to withstand the heavy mass placed upon them by archival materials and shelving. FLC (generally measured per square foot) can be calculated based on projected mass and quantity of records to be stored. Advice from a structural engineer or other qualified professional should be sought.
Storage areas are separate from the loading dock	Loading docks should never open directly into a storage area. This could expose records to harmful pollutants from car engines, as well as disrupt the stability of environmental conditions.

### Principle 3: Environmental control

Records are stored in environmental conditions appropriate to their format and retention period

Records formats are varied, and include paper (files, volumes, maps and drawings), photographic materials (black and white photographs, negatives, slides, transparencies), magnetic media (computer tapes and disks, video tapes, audiotapes), optical media (laser discs, compact discs) and mixed media (objects, models).

Some record formats are more vulnerable than others and require different environmental conditions and specialised storage. Of particular concern are audio-visual records and photographic negatives and transparencies, many of which are prone to 'vinegar syndrome', a type of irreversible deterioration.

Requirement	Explanation
Regular monitoring is undertaken	Regular monitoring should be carried out in storage facilities to ensure that temperature and humidity are being maintained at appropriate levels. The risks to records caused by variations in outside temperature and humidity ranges should be evaluated using a risk management approach.  <b>Refer: NDPRS SECTION 1.4 Environmental Monitoring and Control Plan for Non-digital Archival Records</b>
Records are stored according to the environmental conditions outlined in Appendix 2 –	Proper control of temperature and humidity is critical for long-term preservation. High temperature and humidity levels greatly accelerate deterioration, while high humidity can cause mould to grow, and low humidity can cause paper to become brittle. Fluctuations in temperature and humidity can also damage records, causing stress and moisture is frequently absorbed and released.  <b>Refer: Appendix 2 Recommended temperature and humidity levels for storage of Commonwealth records of enduring value</b>
Records are stored away from direct sunlight or other ultraviolet light sources	Exposure to light damages documents. Records should be housed in protective containers, and direct sunlight should not be allowed to fall on unprotected records.  <b>Refer: Appendix 5 NAA Standard for Storage Containers for Archival Material</b>
Any lighting used in storage areas should have zero or very low UV output.	This can be achieved by using special low UV light globes or tubes, or through filtration. The impact of UV exposure can also be minimised, and energy savings made, by introducing timer controlled switches for all lighting.
Magnetic media are not stored near to	Magnetic fields (including magnetised shelving, high voltage power lines, machines with electric motors, lightning arresters and magnetic flashlights)

magnetic fields	can permanently distort the data contained in record formats such as computer disks and tapes. These formats may require dedicated storage areas and special packaging to protect them from such risk.
Storage areas are clean	Staff should follow the procedures as outlined under the site specific Food and Drink Policy  <b>Refer: NDPRS section 1.3 Food and Drink Policy</b>
Storage areas should have continuous freely circulating air (through use of fans, mechanical ventilation, etc)	Air circulation prevents areas of stagnant air and assists with maintaining constant temperature and humidity conditions. If free circulation of air does not occur naturally, a ventilation system should be provided.
External air intake is to be filtered to remove dust, pollen, and other pollutants	Air quality is a significant factor in the permanence of stored records. Various atmospheric pollutants as well as dust and mould spores can endanger or hasten deterioration of records. Pollutant levels should be monitored, and any air handling system for storage areas should be properly maintained.  <b>Refer: Appendix 3 Maximum limits tolerance for air pollutants for all photographic records, all audiovisual records and records to be kept longer than 30 years (from ISO 11799)</b>

#### Principle 4: Shelving and packaging

The shelving and packaging of records provide protection from damage and slow deterioration.

When selecting shelving (including shelving, racking and cabinets) and packaging (including boxes, folders, wallets, bags) the retention period, physical characteristics and expected level of use of the record should all be considered.

Requirement	Explanation
Shelving should be clean, in good condition, and appropriate to the format and size of the records	Suitable shelving enhances safe access to records, while providing overall support to items and protecting them from physical, chemical and mechanical damage.  <b>Refer: Appendix 4 Recommended Shelving and Packaging for Archival Records</b>
Shelving is raised off the ground	Minimises the risk of flood damage, dampness or dust
Containers are clean, robust, in good condition and appropriate to the format and retention period of the records	Appropriate housing and packaging slows down the rate of temperature and humidity changes; protects items from light, dust and other pollutants; and minimises damage caused through handling.  <b>Refer: Appendix 4 Recommended Shelving and Packaging for Archival Records Appendix 5 NAA Standard for Storage Containers for Archival Material</b>
Storage containers are appropriate for the protective marking of the material	The type of security container to store material is determined by the protective marking of the material and the physical construction of the storage area as described in the Australian Government Physical Security Management Guidelines.

Magnetic media are housed in non-magnetisable shelving	Magnetic fields (including magnetised shelving, high voltage power lines, machines with electric motors, lightening arresters and magnetic flashlights) can distort the data contained in record formats such as computer disks and tapes. These formats may require dedicated storage areas and special packaging to protect them from such risk.
--	--

### Principle 5: Accessibility

Records can easily be identified, located and retrieved.

The principle of accessibility should guide decisions made regarding the location of the storage facility, its design, and physical and intellectual systems used to the control the records.

Ensuring that equipment or technology-dependent records remain accessible for as long as they are required (eg audiovisual material and magnetic tapes) may involve the conversion or migration of some record formats during storage.

Requirement	Explanation
Records must be identified and registered in a system which controls the records and allows efficient retrieval.	Intellectual control of records and archives is a fundamental principle of good records management. If records are not registered in a database or inventory, effective management becomes difficult.  <b>Refer: <i>CRS Manual</i></b>

### Principle 6: Handling

Records are retrieved, handled and used in a manner that prevents damage and slows deterioration

Requirement	Explanation
Policy and procedures for records handling are clearly defined	Records in all formats are likely to deteriorate if not treated correctly. Policy and procedures guiding the proper handling of records should be clearly defined, and observed by staff.  <b>Refer:</b> <b>NDPRS section 1.3 Food &amp; Drink Policy</b> <b>NDPRS section 1.11 National Guidelines for Packing and Transporting Archival Records</b> <b><i>Moving custodial records from and between Archives' Offices<sup>1</sup></i></b> <b><i>Lending Services Manual</i></b>
Staff are trained in records handling practices	All appropriate staff should be aware of and have training in procedures in the safe and correct handling of records.
Material is handled in accordance with its protective marking	Protectively marked material has additional handling requirements. Refer: <i>Archives' Information Security Procedure</i> <i>Archives' Personnel Security Procedure</i>

## Principle 7: Privacy and Security

Storage conditions ensure the privacy and security of the records.

All records require a basic level of security to ensure their authenticity, reliability and integrity, and to prevent misuse. Legislation such as the *Archives Act 1983*, *Privacy Act 1988* and the *Crimes Act 1914* protects government information from disclosure, either by a Commonwealth employee, or a person who performs services for or on behalf of the Commonwealth.

Requirement	Explanation
Records storage areas are access controlled	Access to storage areas should be limited to authorised personnel only, and a register of keys/swipe card allocation should be kept.
Storage areas are appropriate to the protective making of the material	To minimise the risk of theft or vandalism, storage areas should be secure. Where the storage area is a free-standing building, this means that the number of entrances should be minimised, the perimeter should be well-lit and fenced, and all windows and doors should be lockable.
Protectively marked records are stored and managed appropriately	Protectively marked records need to be managed and stored appropriately. The Archives' <i>Information Security Procedure</i> provides minimum standards governing the protection of protectively marked information.
The building has 24-hr physical or electronic surveillance and alarm systems	The building should have tested and monitored security systems in place.

## Principle 8: Protection from disaster

Disaster management programs are established and maintained to minimise risks

Disaster management is an integral part of good management practice for all Commonwealth agencies. The aim of a disaster management plan is to avert disaster, or, should a disaster occur, to minimise damage to records. A disaster management plan should form part of a business continuity plan (BCP), which minimises the impact of a business interruption and ensures the resumption of critical services to government and public clients.

Requirement	Explanation
A disaster management plan and procedures are kept current and are known to staff	A disaster management plan should be tested and reviewed annually.
Personnel are assigned responsibilities in the records disaster management process and are trained to meet them.	Staff should be familiar with the Disaster Management Plan so that they are able to follow it. A staff list assigning particular responsibilities should be maintained. Training in emergency procedures will ensure that records are not damaged by delays, or by the salvage process itself.
Fire protection and suppression measures are installed in records storage areas and are compliant with the Australian Building Code and appropriate standards	To reduce the risk of damage by fire, record storage areas should be fitted with fire protection and suppression methods such as alarms, heat and smoke detection equipment, extinguishers and sprinklers. Expert advice appropriate to archives should be sought on the design, installation and maintenance of fire protection and suppression methods.  For all film-based materials such as photographic still film, motion

	picture film and magnetic tape it is recommended that storage space include a VESDA (very early smoke detection apparatus) system, and that consideration be given to installing a gas flooding fire suppression system, rather than a sprinkler system.
Doors and walls have a 2-hr FRL rating	The walls (including doors), floors and ceilings between storage areas and other areas of the building should be constructed so as to prevent fire (and water) from spreading into a neighbouring area. A minimum of 2 hours fire resistance is recommended.

### Principle 9: Monitoring and maintenance

The storage facilities are monitored, managed and maintained to ensure the ongoing safety of stored records.

Storage facilities need to be regularly monitored and well-maintained to ensure that they remain safe for record storage. Maintenance and inspection of the building's fabric, fitting and services minimises risk.

Requirement	Explanation
A building maintenance plan is in place	A building maintenance plan will prompt necessary upkeep of facilities services and equipment.
The building and storage areas are monitored regularly	The building and storage areas should be monitored on a weekly basis for <ul style="list-style-type: none"> <li>- cracks, dampness, plaster corrosion, water leaks or spillages, blockages in drains, roofs and gutters, and other signs of damage</li> <li>- signs of unlawful entry or vandalism</li> <li>- condition of utilities and internal fittings, such as electrical equipment</li> <li>- signs of pests or mould</li> </ul>
Repairs to facilities are carried out promptly once problems are identified	Prompt repairs carried out as part of a business maintenance plan alleviates the risk of damage to records.
An integrated pest management program is in place	Insects, rodents and other vermin pose a significant risk to records holdings. Integrated Pest Management (IPM) is a low toxicity means of controlling pests and mould.

### 3 Recommended temperature and humidity levels for storage of commonwealth records of enduring value

Format	Temperature	Relative Humidity
Paper records: <ul style="list-style-type: none"> <li>▪ Files</li> <li>▪ Cards</li> <li>▪ Computer print-out</li> <li>▪ Maps</li> <li>▪ Plans</li> <li>▪ Charts</li> <li>▪ Posters</li> </ul>	17°C - 23°C <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 3°C</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> </ul>	30% - 50% <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 10%</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> </ul>
Composite materials and sensitive materials: <ul style="list-style-type: none"> <li>▪ Bound volumes</li> <li>▪ Parchment documents</li> </ul>	17°C - 23°C <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 3°C</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> </ul>	40% - 50% <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 5%</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> </ul>
Black and white (silver gelatine) photographic prints		
Miscellaneous: <ul style="list-style-type: none"> <li>▪ Models</li> <li>▪ Objects</li> <li>▪ Mixed media items</li> </ul>		
Photographic media: <ul style="list-style-type: none"> <li>▪ Sheet film</li> <li>▪ Cine film</li> <li>▪ Colour print material</li> <li>▪ Historic photographic prints</li> <li>▪ X-rays</li> <li>▪ Microforms</li> <li>▪ Glass plate negatives</li> <li>▪ Lantern slides</li> <li>▪ Photographic media with vinegar syndrome (require isolation from other materials)</li> </ul>	3° C - 5° C <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 1°C</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> <li>▪ Records must be acclimatised when being moved in and out of storage space</li> </ul>	35% - 45% <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 5%</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> </ul>
Optical media: <ul style="list-style-type: none"> <li>▪ Compact and mini discs</li> <li>▪ Laser discs</li> </ul>		
Gramophone disks		
Magnetic media: <ul style="list-style-type: none"> <li>▪ Computer tapes and disks</li> <li>▪ Video tapes</li> <li>▪ Audio tapes</li> <li>▪ Magneto-optical disks</li> </ul>	7° C - 9° C <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 1°C</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> <li>▪ Records must be acclimatised when being moved in and out of storage space</li> </ul>	35% - 45% <ul style="list-style-type: none"> <li>▪ Tolerable daily change of 5%</li> <li>▪ There is no 'set point', any reading within this range is acceptable</li> <li>▪ Continuous control required</li> <li>▪ Records must be acclimatised when being moved in and out of storage space</li> </ul>

<p>Preservation master film material:</p> <ul style="list-style-type: none"><li>▪ Sheet film</li><li>▪ Cine film</li></ul>	<p>-20°C - -10°C</p> <ul style="list-style-type: none"><li>▪ Tolerable daily change of 3°C</li><li>▪ There is no 'set point', any reading within this range is acceptable</li><li>▪ Continuous control required</li><li>▪ Records must be acclimatised when being moved in and out of storage space</li></ul>	<p>30% - 50%</p> <ul style="list-style-type: none"><li>▪ Tolerable daily change of 5%</li><li>▪ There is no 'set point', any reading within this range is acceptable</li><li>▪ Continuous control required</li><li>▪ Records must be acclimatised when being moved in and out of storage space</li></ul>
--	---	--

#### 4 Maximum limits tolerance for air pollutants for all photographic records, all audiovisual records and records to be kept longer than 30 years (from ISO 11799)

Type of pollutant	Volume fraction $\times 10^9$ *	Weight per cubic metre of air ( $\mu\text{g}/\text{m}^3$ )
Sulfur dioxide (SO <sub>2</sub> )	5 to 10	
Nitrogen oxides (NO <sub>x</sub> )	5 to 10	
Ozone (O <sub>3</sub> )	5 to 10	
Acetic acid (CH <sub>3</sub> COOH)	< 4	
Formaldehyde (HCHO)**	< 4	
Dust particles, including mould spores***		50

\* Volume fraction  $10^9$  is equal to a part per billion by volume.

\*\* The levels for acetic acid and formaldehyde are based on experience from the US National Archives.

\*\*\*The limit for dust particles presupposes a removal by the air filtration system of 60 % to 80 % of the dust particles with a diameter of more than 0.5  $\mu$ .

## 5 Recommended shelving and packaging for archival records

Format	Shelving	Packaging
Paper records: <ul style="list-style-type: none"> <li>▪ Files</li> <li>▪ Cards</li> <li>▪ Computer print-out and other papers</li> <li>▪ Parchment</li> </ul>	Powder coated or baked enamel metal shelving.	<ul style="list-style-type: none"> <li>▪ Boxes of corrugated paperboard which meets the National Archives archival quality standard. Boxes shall be produced to the 'Type 1' design with variations specific to materials of different formats and sizes.</li> <li>▪ File covers, wallets, folders or envelopes of paper or paperboard which meets the National Archives archival quality standard.</li> </ul>
Paper records (Outsize): <ul style="list-style-type: none"> <li>▪ Maps</li> <li>▪ Plans</li> <li>▪ Charts</li> <li>▪ Posters</li> </ul>	Powder coated or baked enamel metal plan cabinets or shelving. Flat storage preferred, otherwise rolled storage.	<ul style="list-style-type: none"> <li>▪ Sturdy plan folders of board which meets the National Archives archival quality standard.</li> <li>▪ Particularly large items may require tailor-made rigid folders for storage on open shelving.</li> <li>▪ Items which cannot be stored flat due to size should be rolled around a core and stored within a larger tube.</li> <li>▪ Fragile items should be interleaved with paper which meets the National Archives archival quality standard.</li> <li>▪ Fragile or significant items can be additionally protected through encapsulation in polyester enclosures.</li> </ul>
Bound volumes	Powder coated or baked enamel metal shelving.	<ul style="list-style-type: none"> <li>▪ If in good condition can be stored unprotected.</li> <li>▪ Small volumes can be stored vertically.</li> <li>▪ Large volumes should be stored horizontally, not more than 2 high.</li> <li>▪ If volumes are damaged or fragile, or particularly valuable they should be stored in tailor made boxes or slipcases made from board that meets the National Archives archival quality standard.</li> </ul>
Miscellaneous: <ul style="list-style-type: none"> <li>▪ Models</li> <li>▪ Objects</li> <li>▪ Other 3D items</li> <li>▪ Mixed media items</li> </ul>	<ul style="list-style-type: none"> <li>▪ Powder coated or baked enamel metal shelving.</li> <li>▪ Pallet racking for outsize items.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Boxes made of corrugated paperboard which meets the National Archives archival quality standard. If no suitable box exists in the standard range, a box should be tailor-made for the item.</li> <li>▪ Particularly heavy or large items can have wooden crates specially constructed to house them. The wood should be varnished to seal it and the varnish should be well aired before the crate is put into use.</li> <li>▪ All packaging and wrapping materials should have passed the Photographic Activity test (PAT).</li> </ul>

<p>Photographic media:</p> <ul style="list-style-type: none"> <li>▪ Black and white (silver gelatine) photographic prints</li> <li>▪ Sheet film</li> <li>▪ X-rays</li> <li>▪ Microforms</li> <li>▪ Historic photographic prints</li> <li>▪ Colour prints</li> </ul> <p>Magnetic media:</p> <ul style="list-style-type: none"> <li>▪ Computer tapes and disks</li> <li>▪ Video tapes</li> <li>▪ Audio tapes</li> <li>▪ Magneto-optical disks</li> </ul> <p>Optical media:</p> <ul style="list-style-type: none"> <li>▪ Compact and mini discs</li> <li>▪ Laser discs</li> </ul> <p>Gramophone discs</p>	<p>Powder coated or baked enamel metal shelving.</p>	<ul style="list-style-type: none"> <li>▪ Boxes of inert polypropylene which has passed the Photographic Activity Test (PAT) or corrugated paperboard which meets the National Archives archival quality standard. Boxes shall be produced to the 'Type 1' design with variations specific to materials of different formats and sizes.</li> <li>▪ Archival non-buffered containers, wallets, folders or envelopes that have passed the Photographic Activity Test (PAT).</li> </ul>
<p>Cine film</p>	<ul style="list-style-type: none"> <li>▪ Powder coated or baked enamel metal shelving.</li> <li>▪ Galvanised iron or stainless steel racking.</li> </ul>	<ul style="list-style-type: none"> <li>▪ On polypropylene cores and in film cans that have passed the Photographic Activity Test (PAT)</li> <li>▪ Films should be stored horizontally, stacked no more than 6 cans high for 16mm film and no more than 3 high for 35mm film</li> </ul>
<p>Glass photographic materials:</p> <ul style="list-style-type: none"> <li>▪ Glass plate negatives</li> <li>▪ Lantern slides</li> </ul>	<ul style="list-style-type: none"> <li>▪ Powder coated or baked enamel metal shelving.</li> <li>▪ Stationary shelving.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Boxes of inert polypropylene which has passed the Photographic Activity Test (PAT) or corrugated paperboard which meets the National Archives archival quality standard. Boxes shall be produced to the 'Type 1' design with variations specific to materials of different formats and sizes.</li> <li>▪ Archival non-buffered containers, wallets, folders or envelopes that have passed the Photographic Activity Test (PAT).</li> <li>▪ Require additional shock protection. All products used for this purpose should have passed the Photographic Activity Test (PAT)</li> <li>▪ Require vertical storage.</li> </ul>

## 6 NAA standard for storage containers for archival material

All archival records will be placed in a storage container. The nature of this container will depend on the type of material, as follows:

### **General storage (files, binders, documents, photographs)**

Boxes are produced of corrugated paperboard which meets the National Archives archival quality standard. Boxes shall be produced to the 'Type 1' design with variations specific to materials of different formats and sizes.

### **Outsize or unusually shaped items**

Where applicable, a box from amongst the range of NAA standard designs should be used. If no suitable box exists a box should be tailor-made for the item. All boxes should be constructed from corrugated paperboard which meets the National Archives archival quality standard. Particularly heavy or large items can have wooden crates specially constructed to house them. The wood should be varnished to seal it and the varnish should be well aired before the crate is put into use.

### **Maps, plans, charts and posters**

These are stored in sturdy plan folders of board which meets the National Archives archival quality standard. Folders are stored in groups in plan cabinets. Particularly large items may require tailor-made rigid folders for storage on open shelving. Items which cannot be stored flat due to size should be rolled around a core and stored within a larger tube.

### **Audiovisual material (motion picture film, magnetic media) and microfilm**

These are stored in boxes or 'film cans' of an inert plastic which has passed the Photographic Activity Test.

### **Still film (photographic negatives, transparencies)**

These are stored either in boxes of inert plastic which has passed the Photographic Activity Test or corrugated paperboard which meets the National Archives archival quality standard. This material is always given a first level of protection in the form of enclosures of archival paper which has passed the Photographic Activity Test and/or sleeves or bags of inert plastic which has passed the Photographic Activity Test.