

## CREATING OR IMPROVING STORES

Most museums do not have their entire collection on display. Large numbers of objects are kept in storage and may remain there for extended periods. Providing appropriate storage conditions for these objects is therefore very important for their preservation.

This factsheet outlines aspects that should be taken into account when designing, creating or improving a store. It concentrates on the general principles of good museum storage.

Information about storage methods and techniques for particular (groups of) objects, appropriate environmental conditions, light levels and related subjects can be found in associated factsheets and other publications available from Museums Australia (Vic).

## WHY A STORE?

Storage facilities are essential in the management of the collection because:

- they allow the displays to be changed, helping to maintain public interest in the museum
- they protect the items against the harmful effects of light, unfavourable temperature/ humidity, pests, dust and stresses resulting from display techniques, ensuring the preservation of the collection for the future
- they provide space for expansion of the collection
- they provide space for reserve collections and items that are of academic or educational interest, but which are not suitable for display

In the ideal situation, the museum store should be built to the highest specification possible. However, museums are often obliged to adapt existing rooms or buildings to create storage facilities. Whichever situation applies, there are a number of factors that need to be addressed and these are outlined below.

## REQUIREMENTS FOR A STORE

In the publication *Environmental Management: Guidelines for museums and galleries*. (Cassar, M. (1995) Routledge/Museums & Galleries Commission) a store in its most basic form is described as “**a clean, watertight, accessible and pest-free space**”. A store meeting these criteria would be suitable for the storage of sturdy objects in sound condition.

For collections containing sensitive material, criteria such as the use of inert materials and the control of light and environmental conditions also need to be addressed. These are discussed in more detail below. Safety and security are also outlined, as these are issues that need to be addressed in all stores.

## THE SPACE

The ideal position for a store would be in the centre of a building, with a minimum of external walls, to ensure that the environmental conditions are as stable as possible. Services such as water and drainage should not be positioned in, above or near the store.

In a specifically designed building, the store should be separate from (but have easy access to) display areas, offices and workshops. Routes for transporting objects into the stores should be obstacle free and include wide corridors and doors.

In many existing museums, stores are often situated in marginal areas such as attics and basements. If the use of these spaces cannot be avoided, additional measures may have to be taken to reduce the risks associated with them. These may include substantial repairs or improvements to the building itself (eg: upgrading the floor loading capacity) and can result in high costs. In such cases it may be more cost-effective to create a store elsewhere in the building or consider extension of the building to create a new store.

## WATERTIGHT

The ingress of water caused by leaks or flooding can be devastating to the entire collection. To prevent water damage it is important that the building fabric and roof are in good condition, that gutters and drains are maintained regularly and that external doors have adequate seals.

**Annual maintenance inspections** of the building and its systems and equipment will keep them in good condition. More detailed **building surveys** once every five years are essential to thoroughly check the condition of the building and identify any problems.

## CLEAN

Prevent ingress of dust and dirt by:

- ensuring that there are no gaps and cracks between ceiling-tiles and floor-boards, around doors and where walls meet floors or ceilings
- fitting filters to air conditioning or ventilation units
- finishing/sealing the surfaces of (concrete) floors, walls and ceilings

Stores need to be cleaned regularly. This means a monthly vacuum cleaning of floors and dusting of shelving units, cupboards and cabinets.

## PEST-FREE

Prevent access of insects and vermin to the store by:

- not allowing birds access to attics
- ensuring that doors (and any windows) are well sealed
- creating a quarantine area for newly acquired and potentially infested items
- using insect traps to monitor the presence of insects

Deal with infestations as a matter of urgency, but without panic. It usually takes several months before the next generation of insects emerges, so finding one or two adult insects in a store does not necessarily have to lead to mass-treatment of everything in the same store.

The safest method of dealing with infestations in heritage collections is to remove access and food sources, and to seal infested objects in plastic and freeze them for a period of two to four weeks. This will kill pests and eggs. Consult a conservator or the AICCM website to ensure that freezing is a safe option for your objects.

## ACCESS

It is important that storage areas are used for storage alone and not doubled up as office or work spaces. Rooms that function as a corridor are not suitable as a store. Shop stock, display panels and any other non-collection materials should not be kept in collection stores. If noncollection material is provided with its own area (which does not need to meet collection standards) it will not take up valuable storage space.

The most effective way of storing a collection is to:

- use shelves, cupboards and other suitable storage systems
- keep aisles and paths clear and don't place items on the floor
- make use of standard storage systems and materials
- use a limited number of box sizes that match the size of the shelves and cupboards so that they can be stacked in the most efficient way

A system involving clearly marked shelves, boxes, cupboards and location records will allow easy access to objects. The store should have a dedicated table for putting down objects and boxes. This can also be used for labelling of new items and for brief object examination. If the collection is consulted frequently for research, a separate research room should be created - where light levels and temperatures can be adjusted for human comfort.

## LIGHT

Daylight causes UV damage. It is not needed in stores and should be excluded entirely. Windows can also be a cause of heat-gain in summer and heat-loss in winter. New stores should be designed without windows. In existing stores, light can be excluded and the insulating properties improved by bricking up or blocking off the windows. In exceptional circumstances, where this cannot be achieved, heavy curtains or blackout blinds can be used. It is important to provide sufficient **artificial light** for the safe handling and movement of objects. This light only needs to be used when

people are in the store.

## ENVIRONMENTAL CONDITIONS

Stability of temperature and relative humidity is important for collection preservation. The stability of the environment in a store can be improved by ensuring that the room and building provides an effective envelope against unfavourable environmental conditions.

This includes:

- building surveys once every five years to ensure that the building is in good condition
- any problems identified as a result of the survey (such as the ingress of water/dust/dirt/insects) being promptly addressed
- specification of good insulating properties for external walls and doors, internal walls, doors, ceilings and floors. This will allow the store to act as a fully insulated cell, in which the conditions can be kept stable without excessive use of additional mechanical control equipment.

As with all areas containing collection items, continuous monitoring is needed to assess whether the store is able to maintain stable conditions within recommended levels. Guidelines for ideal environmental can be found in this AICCM resource: <http://www.aiccm.org.au/resources/collection-care/australian-resources/guidelines-environmental-control-institutions>

## INERT MATERIALS

It is important that all materials used to construct, improve or furnish the store do not produce any dust or harmful vapours.

**Avoid:**

- all PVC (polyvinyl chloride: a plastic) based materials
- the use of unsealed wood and wood products
- foam or rubber backed carpets and carpet adhesives. In fact, carpets are not needed in a store and their use should be avoided entirely.

**Ensure that:**

- brick and concrete surfaces are sealed with a coat of paint or plaster
- metal is sealed

## SAFETY

Whilst the above requirements have been determined to create the appropriate conditions for objects, the needs of people using the store need to be remembered. All equipment (steps, ladders, roller racking, shelving, heating, air-conditioning) must meet Australian Standards or other appropriate regulations and must be operated following the manufacturer's instructions. Ensure that all staff using the equipment have been trained in its safe and proper use.

Many safety issues are common sense:

- ensure that shelving units are not higher than an average person can comfortably reach (with or without the use of steps)
- avoid packing boxes so full that they become too heavy to handle
- store heavy or large items on lower shelves rather than upper shelves
- use steps, trolleys or baskets and ask for assistance if an item cannot be handled safely by one person
- observe the Health and Safety Standards for lifting, handling and carrying large, heavy or awkwardly shaped items
- ensure that the route used when moving collection items is: free of obstructions; that doors have (temporarily) been blocked open; and that a receiving space has been created for the object
- keep stores clean and tidy and never store anything in aisles

## SECURITY

All the efforts of creating good storage facilities may be lost if the store is accessible to thieves and vandals. Some of the issues already discussed will assist in providing security to the collection, such as the elimination of windows from stores and the general upkeep of the building. Security for storerooms can be provided by:

- creating a secure room or installing a safe for very valuable items
- using lockable storage furniture
- keeping the stores locked to all but authorised personnel
- allowing access to researchers only under guidance (if at all)
- allowing access to cleaners only after screening and training

## FURTHER INFORMATION AND ADVICE

Basic advice on storage and collection management practices can be found in *The Small Museums Cataloguing Manual*. For more in-depth information use the *National Standards for Museums and Galleries*. Both are on the Museums Australia resources page <http://mavic.asn.au/resources/infosheets>

Information on conservation, object handling and storage can be found in *ReCollections* (Heritage Collections Council). *ReCollections* is available online <http://www.aiccm.org.au/resources/collection-care/australian-resources/recollections>

Museums Australia (Vic) can provide assistance with the location of further information on collections care and conservation for small museums. Contact: 03 8341 7344 or [mavic@mavic.asn.au](mailto:mavic@mavic.asn.au)

Further conservation information can be found on the Australian Institute for the Conservation of Cultural Materials (AICCM) website [www.aiccm.org.au](http://www.aiccm.org.au)

This factsheet has been adapted for use in Australia by Sarah Slade for Museums Australia (Victoria) with kind permission from the Scottish Museums Council.