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# Factsheet:

## Creating or Improving Stores

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### Introduction

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 Scottish Museums Council factsheets.

### Why a Store?

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

- they allow the displays to be changed, thereby helping to maintain public interest in the museum
- they protect the items against the harmful effects of light, unfavourable temperature/humidity, dust and stresses resulting from display techniques, thus 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 (as with the display areas) should be built to as high a specification as 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 *Environmental Management: Guidelines for Museums and Galleries*. (May Cassar, Routledge/ Museums & Galleries Commission, 1995) 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 aspects that affect both types of stores and these are therefore also included.

## The Space

The ideal position for a store in a building would be centrally placed, 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 purpose-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 (e.g. to improve 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 roof is in good condition, that eaves, gutters, rainwater-pipes and drains are maintained regularly and that external doors have adequate seals. Other water-related problems can be caused by rising damp and leaking radiators, humidifiers or tanks.

**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 the surfaces of (concrete) floors, walls and ceilings

Furthermore, stores need to be cleaned regularly. This does not mean a thorough annual spring cleaning exercise, but 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.

## **Access**

It is important that storage areas are used for storage alone and not doubled up as office or work space. Rooms that function as a corridor are not suitable as a store. Shop stock, display panels and any other non-collection material has no place in the objects store. If it is provided with its own area (which does not need to meet collection standards) it will no longer take up valuable storage space.

The most effective and organised way of storing a collection is to use shelves, cupboards and other suitable storage systems; keep aisles and paths clear and don't place any items on the floor. Make use of standard storage systems and materials wherever possible: 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

A table is useful for putting down objects, boxes etc. while using the store. It can also be used as a work area for labelling of new items and for brief examination.

If the collection is consulted frequently for research, a separate research room may be useful where light levels and temperature can be adjusted for human comfort.

## **Light**

**Daylight** is not needed in stores and can be excluded entirely. Windows can also be the cause of heat-loss in winter and heat-gain in summer. It is therefore better to design new stores 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 (e.g. because the building is 'A'-listed) heavy curtains or blinds, or sufficient protection against light directly around the object (packing material, cabinet, cupboard, etc.) may be an alternative.

It is important to provide sufficient **artificial light** to be able to safely handle and move objects. This light needs to be in use only when people need access to the store.

## **Environmental Conditions**

The stability of the environmental conditions in a store can be improved by ensuring that the room and/ or building itself can provide 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 rising damp, ingress of water/ dust/ dirt/ insects) to be addressed and rectified
- specification of good insulating properties ("low U-values") for external walls and doors and preferably also for internal walls, doors, ceiling and floor. 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 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.

## **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 wood and wood products
- foam or rubber backed carpets and PVA (polyvinyl acetate: another plastic) carpet adhesive. In fact, carpets are not needed in a store and their use can be avoided entirely.

### **Ensure that:**

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

## **Safety**

Whilst the above requirements have been determined to create the appropriate conditions for objects, the needs for the people using the store must not be forgotten.

Any equipment to be installed or used (steps, ladders, roller racking, shelving, heating, air-conditioning) must meet British Standards or other appropriate regulations where applicable and must be operated following the manufacturer's instructions. Ensure that

all staff using the equipment have been trained how to do so safely and properly.

Many safety issues are based on 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 the lower shelves, not the upper
- use steps, trolleys or baskets as appropriate and ask for assistance if an item cannot be handled safely by one person
- observe the Health and Safety rules for lifting, handling and carrying large, heavy or awkwardly shaped items
- ensure that the route to be travelled while moving an item 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 (parts of) the store are easily accessible to thieves and vandals. Some of the issues discussed above will assist in providing security to the collection, such as the elimination of windows from stores and the general upkeep of the building. Security issues for stores can be included in those for the entire museum.

Additional security for store rooms can be provided by:

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

## **Emergency Planning**

It is good practice for museums to have an 'Emergency' or 'Disaster' Plan for the entire museum, which includes the stores. SMC runs training courses on Emergency Planning, designed to assist you identify threats and mitigate risks – and to equip you to deal with object salvage should an incident occur.

### **Further information and advice**

This is one of a series of factsheets, advice sheets and guidance notes produced by SMC on common collections care and preventive conservation issues. For more details, signposting to further sources of advice or information on how to contact a conservator, see our website at: [www.scottishmuseums.org.uk](http://www.scottishmuseums.org.uk)

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