



University of  
St Andrews

## Collections care and conservation policy

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# Policy

## **1. Introduction**

This policy has been written to define the responsibilities of the Museums of the University of St Andrews (henceforth Museums), with regard to the long-term preservation of its collections.

Museum collections are threatened by various agents of decay. These agents come in a variety of forms, including:

- Incorrect environment – relative humidity, temperature, light and pollutants
- Pests – rodents and insects
- Direct physical forces – handling and movement
- Theft and vandalism
- Fire and flood

This Collections Care and Conservation Policy deals with the potential threat to collections during normal operations from environmental conditions, object handling / moving and pests. It sets out requirements to limit damage through preventive conservation practices, as well as standards for remedial conservation to improve and stabilise the condition of collections.

## **2. Definitions**

Preventive Conservation – the measures necessary to slow down or minimise deterioration of museum objects.

Remedial conservation – a treatment to an object or specimen to bring it to a more acceptable condition or state in order to stabilise it or enhance some aspects of its cultural or scientific value.

## **3. Policy Statement**

### **3.1 Strategic Aim**

*The Museums' enduring mission is to steward and share the University's collections, engaging people everywhere with the intellectual and cultural life of St Andrews.*

### **3.2 Implementation**

The Director of Libraries & Museums and the Assistant Director (Heritage Collections and Curation), with the support of the Collections Team are responsible for the implementation of the Collections Care & Conservation Policy and associated plans and procedures.

Realisation of the policy aims is applicable to all staff in Museums as it relates to their specific area of work, and the University's Estates department in line with their responsibility for buildings and building systems.

The Honorary Curatorial Fellows are responsible for safe object handling and ensuring this part of the policy (and associated guidelines) are adhered to when teaching with collections. They should also act with awareness of the other areas covered by this policy, which are outwith the specific scope of activity assigned to Curatorial Fellows.

### **3.3 Maintaining standards**

#### **3.3.1 External guidelines**

Museums will pursue best practice in collections care and conservation through reference to guidance and standards such as *PAS 198:2012* 'Specification for Managing Environmental Conditions for Cultural Collections'; *PD 5454:2012* 'Guide for the Storage and Exhibition of Archival Materials'; *SPECTRUM 5.0 (2017)*; *Benchmarks in Collections Care 2.0* self-assessments; and the *Code of Ethics for Museums (2015)*.

The policy will be regularly reviewed and improved to reflect current standards of thinking in the heritage sector for the long-term preservation of the collections. Guidelines in the published literature and from bodies such as the Arts Council England (ACE), Museums Galleries Scotland (MGS), the Collections Trust and others, will be consulted.

Museums will also refer to the University's Sustainable Development Policy and Strategy and consider this in strategic planning and in the purchase of materials, where relevant and appropriate, taking into account the specific needs of museum collections.

#### **3.3.2 Promotion and dissemination**

The Collections Care & Conservation Policy, together with associated procedural documents, will provide guidelines and practical information to staff, to enable them to maintain and improve standards of care for the collection.

The policy will be disseminated to staff within Museums, to other relevant staff within the University and to freelance staff working to support the care and conservation of the collection, to ensure that they are aware of and follow the policy statements and associated procedures, as required by their role in achieving the stated aims and objectives.

Information on collections care issues should be included in staff induction so that all staff are made aware of the key issues.

#### **3.3.3 Staff training**

Training for staff at all levels is developed considering professional guidelines. Awareness of preventive conservation and collections care issues should be raised for all staff in Museums (and as appropriate in other departments, ie. cleaning staff, maintenance staff, Curatorial Fellows).

Specialist Collections staff should maintain their professional knowledge by attending relevant conferences and courses allowing them to provide up-to-date advice on actions and procedures.

### **3.4 Planning**

#### **3.4.1 Condition assessment**

In order to maintain and improve standards of care and conservation, a planned programme of condition assessment is in place.

Condition assessment will also form an integral part of the process for acquisition, display, loans-in and loans-out. This assessment is central to informing decision-making in all of these processes.

### **3.4.2 Cost-benefit analysis**

Cost-benefit analysis should be carried out for projects that impact on the condition of the collections, recognising that factors such as running costs of equipment as well as the cost and frequency of remedial conservation work must be considered in long term budgets. For example, initial investment in building capability will reduce running costs for conservation, heating and (de)humidification requirements. Adhering to good preventive conservation practices will reduce the need for and cost of remedial conservation.

### **3.4.3 Long-term planning**

Improving the care of collections through building maintenance, improved environmental conditions, remedial conservation and the continuing professional development of staff, requires long-term commitment and planning of resources by the University of St Andrews.

## **3.5 Beyond the University of St Andrews**

Museums ensures via its loan agreements that objects travelling outside the University's Estate are cared for appropriately, including conditions on insurance, storage and display (for further particulars see Documentation Procedural Manual - Loan Out Form).

## **4 Policy Aims**

### **4.1 Environmental Conditions**

Museums aims to provide suitable environmental conditions for the collections in its care, wherever possible. Storage and display conditions should meet recognised environmental standards in order to minimise deterioration to collections.

See Appendix 1 for more detail.

### **4.2 Integrated Pest Management (IPM)**

IPM offers a holistic approach to the problem of pests by establishing procedures for prevention, monitoring and treatment of pest activity/infestation.

Museums recognises that museum pests are a very real danger to the collections and therefore that an IPM programme is essential for the long-term preservation of collections. It aims to carry out actions for prevention and treatment, to the best of its ability, to stop pest infestation from damaging the collections.

See Appendix 2 for more detail.

### **4.3 Object Handling and Moving**

Museum objects are at high risk of accidental damage when they are being handled or moved. Damage caused by handling can also be cumulative and not immediately apparent to the user. It is therefore important to know how to handle all objects in the correct and most appropriate way.

Museums aims to minimise the risk of damage to objects through adherence to best practice in handling, packing and moving / transport of objects, as set out in the associated procedures and guidance.

See Appendix 3 for more detail.

### **4.4 Storage and Display Furniture**

The use of well-designed storage and display furniture is an essential tool in the implementation of the Collections Care and Conservation Policy. Display cases and storage units benefit the preservation of collections through:

- Protection from touching, handling or accidental damage
- Reduced risk of theft or vandalism
- Protection from dust and other damaging particulates
- Protection from fluctuating relative humidity
- Protection from pests
- Reduced exposure to other environmental factors, e.g. UV light

Museums will favour the use of well-sealed, conservation standard display cases for the exhibition of objects whenever possible and as appropriate to the object type, size and condition.

Museums will use racking and shelving for storage, where possible and appropriate to increase the capacity of stores, and also to improve the physical protection of objects.

See Appendix 4 for more detail.

#### **4.5 Remedial Conservation**

Remedial conservation consists mainly of direct action carried out on objects with the aim of stabilising condition and slowing down further deterioration; or restoring damaged objects with the aim of facilitating perception, appreciation and understanding of the object, while respecting as far as possible its aesthetic, historic and physical properties.

Museums aims to regularly assess and identify objects requiring remedial conservation work and prioritise these in the detailed, object-specific, Remedial Conservation Plan. Conservation treatments will be carried out to stabilise and preserve artefacts, where possible with minimum intervention, in order to enhance the long-term preservation, social value and historical importance of each object.

See Appendix 5 and Remedial Conservation Plan for more detail.

### **5. Building condition**

Building construction and maintenance is the first level of defence for Museum Collections. Museums and stores provide good standards of physical protection for the collections. A regular programme of inspection and maintenance, carried out by the University's Estates department, ensures the building fabrics remain in a good state of repair, providing physical protection against pest ingress and external environmental conditions.

### **6. Emergency situations**

The threat to collections from unforeseen incidents such as theft and vandalism, fire and flood are covered by University of St Andrews Libraries & Museums Business Continuity Plan (Emergency Plan). The instructions in this plan supersede the Collections Care and Conservation Policy during an emergency salvage situation; however the longer term recovery of collections following a major disaster should be carried out in line with the Collections Care and Conservation Policy.

### **7. Documentation**



All collections care and conservation activities should be documented in line with the standards of the Documentation Policy and Procedural Manual.

## **8. Collections Development**

The Collections Care and Conservation Policy works alongside the Collections Development Policy. As noted in the Collections Development Policy Museums' ability to care for its collections in relation to both the preventive and remedial conservation activities outlined above will inform the decision-making process in relation to acquisition and disposal, as well as incoming and outgoing loan requests.

## Appendix 1

### Recommended environmental conditions

The Museum Collections of the University of St Andrews are broad in the diversity of their material type and too numerous to give an exhaustive list here. However, the collections can be broadly considered in two main types with regard to environmental sensitivity:

1. Organic and sensitive mixed media collections – for example taxidermy, leather, textile, wood.
2. Inorganic and robust collections – for example scientific instruments, ceramics, glass and stone.

The conditions specified here are based on these two main types and are appropriate to most objects within the collection. They are based on recommendations given in the MGC/MLA *Care of Collections* series of publications and the *PAS 198: Specification for managing environmental conditions for cultural collections*.

If a collection is identified as particularly vulnerable and requiring tailored conditions, advice will be sought from specialist curators, conservators or scientists.

The parameters given here are those that are considered ideal for the long-term preservation of the collections. These parameters are currently achieved in the Museums' Collections Centre, the Museums & Libraries Annexe store, and the Wardlaw Museum. Planned improvements to other sites to bring them up to this standard are given in the Collections Care Plan.

The parameters considered here are:

- Relative Humidity
- Temperature
- Visible light
- Ultra-violet radiation
- Display and storage materials

#### 1. Relative Humidity and Temperature

The rate of decay of inorganic material is generally much slower than for organic artefacts. Inorganic material can generally tolerate a greater range of environmental conditions.

One key aspect to decreasing rates of deterioration is to maintain the stability of the environmental conditions. Fluctuations in relative humidity and temperature are serious causes of damage to organic collections. (This should also be considered when moving objects between different storage and display sites, see point 4 below).

## 1.1 Relative Humidity (RH) conditions

### Organic and sensitive mixed-media collections

	0% RH
Limit	As low as possible where possible
Fluctuations	Rate of change should be limited to 10 % within 12 hours, with a maximum of 6% in 3 hours

### Inorganic and robust collections

	5% RH
Limit	As low as possible where possible
Fluctuations	Rate of change should be limited to 10 % within 12 hours, with a maximum of 6% in 3 hours

### Metal specific storage

	30% RH
Relative humidity will accelerate the corrosion of metal objects (note: Museums does not currently have the capacity for a metal specific store)	

## 1.2 Temperature

In general the absolute temperature is less important than the RH (within sensible limits), and it can be used as a variable for controlling RH. Therefore, movement outside the parameters given here is acceptable if the consequence is maintaining RH conditions as set out above.

### All display and storage areas of sensitive materials

	±3 °C *
Limit	As low as possible where possible, with gradually introduced seasonal differences between summer and winter
Fluctuations	Rate of change should be limited to 4°C within 12 hours, with a maximum of 2°C per hour

### All display and storage areas of robust collections

	±5 °C *
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int	ble where possible, with gradually introduced seasonal differences between summer and winter
ptions	of change should be limited to 4°C within 12 hours, with a maximum of 2°C per hour

\* The lower boundary is for human comfort only; most objects would be better preserved at lower temperatures. Where temperature is used to control RH a greater range is acceptable.

### 1.3 Metals specific storage

Generally as for robust collections, but temperature is used to control relative humidity so a higher temperature is acceptable where this achieves a lower RH.

### 1.4 Zoological Fluid specimens

A temperature of <18°C is recommended for fluid preserved specimens. Above this temperature the evaporation of the fluid (ie. industrial methylated spirits, formalin) may occur, with associated increase in health and safety risks. Currently this temperature cannot be consistently maintained in the historic Bute building, which houses the Bell Pettigrew Museum and associated stores, but the situation is under ongoing assessment and consideration for longer term improvements, in consultation with the University's Estates department and Environmental Health and Safety Services.

## 2. Visible light

Damage caused by light is cumulative and varies according to the intensity of light, its wavelength and the exposure period. Therefore, the desired light levels are represented as an annual cumulative exposure.

#### Very sensitive material

Including, but not exclusively, textiles, most works of art on paper, photographic prints, fur, feathers, dyed leather.

l cumulative levels	ux hours per year
exposure levels	lux for 8 hours per day or 100 lux for 4 hours per day

#### Sensitive material

For example, oil paintings, wood, ivory, bone, works of art on paper that are black and white and in good condition.

l cumulative levels	ux hours per year
exposure levels	0 lux for 8 hours per day or 300 lux for 4 hours per day

#### Materials insensitive to light

For example, metals, stone, ceramics, glass, enamels

l cumulative levels	xceed 450 klux hours per year
xposure levels	xceed 150 lux for 8 hours per day

### **3. Ultra-violet radiation**

Ultra-violet radiation is extremely damaging to many materials and wherever possible Museums should aim to achieve zero levels of UV radiation. This is possible in the main museum sites by use of suitable UV-excluding filters which meet recognised museum and gallery standards.

### **4. Moving collections**

When collections are moved the opportunities for both improved access and preservation should be considered. Collections should not be moved into areas with poorer environmental conditions, except in an emergency decant situation.

Environmental conditions in areas between which an object may be moved (e.g., storage and display) should be comparable and this process should not cause any damage to the object.

## **Appendix 2**

### **IPM Guidelines**

#### **1. Potential Pests**

Insects and rodents can pose a major threat to museum collections as well as to the comfort and safety of staff and visitors. They damage museum objects by eating and soiling them, and this damage is almost always irreversible. The most common museum pests include the webbing clothes moth, carpet beetle and the house mouse. (For a more extensive list with images of potential pests please see pest identification posters in Museums' Collections Centre office, the Wardlaw staff room and North Haugh Store work room).

#### **2. Building Maintenance**

The University of St Andrews aims to prevent pests entering museum sites by appropriate maintenance of the building fabric, and discourage pest activity by the provision of suitable environmental control.

##### **2.1 Building Integrity**

Pest species can enter collection areas through a lack of integrity in building fabric, due to neglect, lack of resources or poor design.

Problem areas include uncapped chimneys, broken windows and rotten window frames, poorly fitting doors and ventilation systems with inadequate mesh covering.

##### **2.2 Environmental Control**

Where sensitive materials are stored the RH should not be greater than 60% (as in section 3 above). As some pest species require a relative humidity greater than 60% to complete all stages of their life cycle, this reduces the risk of pest infestation.

#### **3. Quarantine**

Museums will prevent pests entering the museum by quarantine of incoming items that have the potential to be infested.

##### **3.1 Incoming Collection Material**

All new acquisitions and returning loans of objects containing organic material should be quarantined or sealed in polythene to contain any potential infestation. (Objects with no organic parts do not require quarantining, although consideration should be given to packing materials).

Objects entering the museum on loan will be considered for potential pest threats. Collections staff will agree a plan of action with the lender if it is thought necessary.

(See Quarantine and Freezer Procedures for more details)

## **3.2 Incoming Collection and Non-Collection Material**

### **Object Enquiries**

Objects brought in as a matter of enquiry should be directed to the museum enquiries address for consultation with a member of the Collections Team. Items brought to the Museum by members of the public for potential donation should not be accepted by members of the Visitor Services Team unless it has been agreed by prior arrangement with the Collections Team.

### **Learning Activities and Exhibitions**

Materials used in learning activities and as set design for exhibitions must be evaluated to determine their potential for carrying insect populations. Where options are available synthetic materials must be chosen over organics. Where there is potential for pest transfer, quarantine and treatment procedures should be followed.

## **3.3 Movement of Items between museum sites**

In cases when there are known infestations, objects and non-collection materials must be quarantined when moving between museum sites. Information on known infestations must be made known to all staff in Museums.

## **3.4 Quarantine procedures**

For details of the procedures to be followed for both collection and non-collection incoming material please see the document Quarantine and Freezer Procedures, available at: Collections Care\Preventive Conservation\Quarantine and Freezer Procedures.docx

## **4. Monitoring Pest Activity**

Museums will monitor for pest activity and will ensure that staff working in object areas recognise common museum pests.

### **4.1 Insects**

Pest traps will be maintained in all collections stores and galleries, and checked at appropriate intervals. The monitoring programme will be led by the Preventative Conservator in consultation with the wider collection team, and with assistance from the Museum Trainee (Collections).

The data gathered from the monitoring programme will be used to identify areas that require general improvement and immediate action.

### **4.2 Rodents**

Museums recognises that rodents can cause damage by gnawing, but also indirectly contribute to insect problems, as their carcasses can become a food source for insect pests.

Rodent activity should be reported to the Estates department to arrange for pest control contractors to attend the site.

### **4.3 Informal Monitoring**

Informal monitoring is a valuable source of information about insect populations in museum sites. For example, information from the Visitor Services Team at the Wardlaw Museum who

observe insect activity in galleries can be used to enhance the formal monitoring programme.

## **5. Housekeeping**

The University of St Andrews will ensure that good standards of Housekeeping (tidiness and cleanliness) are maintained throughout all areas where museum collections are stored or displayed.

For pest populations to survive they require a food source. The aim of this section is preventing the collections from being that food source. However, it is important to remember that pest species may be encouraged to breed by the ready availability of other food stuff – be it human food waste or dust and debris built up by lack of cleaning.

### **5.1 Food waste**

Human food waste attracts and supports rodent populations. Active rodent populations are unhygienic and unsightly and can lead to bad press for the museum. In addition dead rodents also provide a food source for insect populations.

In areas where food is prepared or consumed (staff rooms, Learning Loft) and there is likely to be food debris, appropriate cleaning measures should be in place to remove it before it can attract rodents.

Consumption of food in the galleries outside of controlled events threatens objects, not just in terms of attracting pests, but also by the potential for direct contact causing damage and staining. A ban on food and drink in galleries is enforced, outside of supervised events, reducing risk to the objects and reducing the amount of staff time required to clean in these areas.

Food and drink served at events can become problematic where clean-up operations are not thorough directly after the function. Where food debris is left after an evening function many hours can pass in which rodent populations can feed before cleaning staff enter the following morning. As University Cleaning Staff do not work beyond 5pm, on occasions that food is served in the galleries in the evening, museum staff should carry out cleaning immediately after the event and arrangements should be made for Estates to carry out thorough cleaning of the area the next morning.

### **5.2 Cleaning**

Cleaning is a vital tool of IPM as it strongly discourages pest activity. Cleaning removes potential food sources for pests and also acts as an informal monitoring process – disturbing places where insects might find harbourage.

Cleaning must remove dust and debris. To perform this task efficiently tools such as vacuum cleaners and microfiber cloths should be used to capture and remove dirt.



### **5.2.1 Gallery Cleaning**

Good co-ordination is required in cleaning areas where multiple staff are concerned. This is especially true in gallery areas where different staff are tasked with cleaning floors, cases and objects.

Gallery cleaning should be co-ordinated by the Head of Experience and Engagement, Retail and Operations Officer, Collections and Exhibitions Curator and Estates.

### **5.2.2 Deep Cleaning**

An annual deep clean of galleries and stores ensures that areas not reached in day to day cleaning are attended to, preventing these spaces from becoming an attractive home for pest species.

See the Collections Care and Conservation Plan for details of general cleaning procedures and the deep-clean programme.

### **5.3 Harborage**

Pest species require undisturbed places to thrive and breed. Reducing the amount of dead space within museum display and storage sites will reduce the potential for pest species to find suitable conditions for living. The opportunity should be taken to reduce dead spaces whenever display, storage systems or accommodation are changed or upgraded.

Dead spaces can be defined as areas that are not accessed or cleaned on a regular basis. The risk of dead spaces can be reduced by adding them to regular deep cleaning.

## **6. Awareness**

High staff awareness of problem species ensures early detection so treatment can progress before significant object damage occurs. Museums will ensure all staff are aware of the consequences of pest infestation, and that staff working in object areas recognise common museum pests. (Training will be provided on IPM as per section 3.3.3 in the Collections Care and Conservation Policy).

### **6.1 Signage**

Increased use of signage in areas with vulnerable collections or known pest problems and enforced restricted movement of objects will add to staff awareness.

Insect identification posters are displayed in The Wardlaw Museum staff room, the Museum's Collections Centre and at the Museums & Libraries Annexe store, as an aid and visual reminder to staff of potential insect pest problems.

## **7. Infestation Treatment**

In the event of a pest outbreak Curatorial staff will manage the infestation by appropriate treatment of objects and the environment (See the IPM Procedures and Quarantine and Freezer Procedures for more details). Any treatment carried out on an object should be recorded in the Collections Database (EMu).

## **Appendix 3**

### **Object Handling and Moving guidance**

#### **1. Handling**

Museums will reduce the need for handling, and the associated risk to objects, through good documentation, digitisation and storage practice.

Museums recognises that handling is a necessary and valuable part of museum work, and that proper handling is essential for the preservation of museum objects. As such, procedures and guidelines for best practice are established in the Object Handling Guidelines document (available at X:\Museums\Collections Care\Preventive Conservation\Object handling guidelines and training).

##### **1.1 Personal Safety**

Object handling should also be carried out with awareness of personal safety. All staff should complete the University's Environmental Health & Safety Services' (EHSS) Manual Handling Essential Skillz course during their staff induction and prior to any handling work. Staff can also refer to the object handling guidelines when handling and moving collections (Museums\Collections Care\Preventive Conservation\Object handling guidelines and training).

For further guidance on safe manual handling in the workplace please refer to the EHSS publication on Manual Handling Operations (<http://www.st-andrews.ac.uk/staff/policy/Healthandsafety/Publications/Manualhandlingoperations/>).

For guidance regarding hazardous materials in museum objects please see the relevant risk assessments on Microsoft Teams (<https://universityofstandrews907.sharepoint.com/:f:/r/sites/Museums/Shared%20Documents/Health%20and%20Safety/3.%20Risk%20Assessments/Collections%20Risk%20Assessments?csf=1&web=1&e=lbud3y>).

#### **2. Packing and packing materials**

The aim of packing is to prevent soiling, abrasion, crushing, movement and damage by impact. If objects are to be moved any distance further than within the room of their current storage or display location, they should be appropriately packed either by soft-wrapping, in a box or crate.

Packing materials should be used to protect vulnerable and fragile parts of an object. It should be noted that packing materials may have adverse effects on an object if the materials are not chemically inert. Inappropriate packing materials can cause tarnishing, corrosion, embrittlement and discolouration. Wherever possible packing material that comes into direct contact with an object should be conservation grade.

#### **3. Movement/Transport**

Movement of objects covers the activities to do with organising and carrying out the transfer of artefacts from one museum location to another.

Transport of objects covers the activities to do with organising and shipping of artefacts to/from approved external locations.

The movement or transport of objects must be carried out or supervised by collections staff from Museums.

### **3.1 Movement**

For moves within Museums sites we will usually use a University van driven by staff from the Estates or Library Operations departments. For particularly large / complex jobs Museums may employ the services of a specialist removals company (including local removals companies with a long-standing relationship with Museums and experience of dealing with Museum objects).

Small consignments or single items may be carried by car or on foot (within a reasonable distance), providing a sufficient number of staff are in attendance.

All moves must be carried out in accordance with the Insurance Policy.

### **3.2 Transport**

For external transport Museums will employ recognised and trusted transport companies.

Any transport company used to move the object(s) must have experience in the transport of fragile and valuable artefacts with employees trained in the handling of such material.

### **3.3 Vehicles**

Any vehicle, whether owned by the University, a transport company or a lender/borrower, used for the transport or movement of museum objects should conform to the following specifications:

- Vehicles used should normally be closed vans (ie. having solid sides and roof) with a windowless freight compartment separate from the driving cab.
- All vehicles should be equipped with good quality locking devices.
- Vehicles should provide appropriate protection against vibration and shock, and extremes in relative humidity and temperature conditions. Air-ride suspension and climate control equipment may be necessary in certain circumstances (note: this is not achievable with the University's own vehicles and if required external contractors would be employed).

## **4. Procedures**

The Object Handling Guidelines is a key document articulating the standards of care all staff and volunteers working with collections are expected to adhere to and therefore it must form an integral part of staff education and training. The guidelines can be found at:

X:\Museums\Collections Care\Preventive Conservation\Object handling guidelines and training

For further guidance on object handling see Collections trust handling fact sheet

(<https://collectionstrust.org.uk/wp-content/uploads/2016/11/Handling-and-packing-fact-sheet.pdf>) or Museum of London Manual Handling tool

(<https://www.museumoflondon.org.uk/Resources/e-learning/handling-museum-objects/>).

All staff must read and sign the Object Handling Risk Assessment prior to any manual handling work.

Procedures relating more specifically to security during transit are detailed in the University's Insurance Policy.

## **Appendix 4**

### **Storage and Display Furniture Recommendations**

#### **1. Materials**

Many materials which may seem suitable for storage or display purposes can cause serious damage to museum collections. They can cause corrosion, discolouration or deterioration of objects, either because they give off harmful vapours or because they are in direct contact with museum objects.

Wood or composite boards, solvent-based paints, sealants, formaldehyde and other solvent-based adhesives are all common local sources of gaseous pollution.

Wool (carpeting, felt, baize, etc.), latex or rubber backings on carpets and rubber floors are all sources of gaseous sulphide pollution.

In order to reduce the risk of damage through pollution Museums will wherever possible avoid using any of the materials mentioned above in new displays and stores. Museums will aim to use materials that have been tested and shown to give off no harmful vapours, whether for flooring, racking, shelving, display cases and interior linings, mounts and panels, open display plinths.

New storage and display furniture will be constructed from metal covered with enamel or epoxy powder coating, or Forex, which are chemically inert.

Unsafe materials already existing in museum displays and stores will be replaced or sealed with an acrylic varnish (as appropriate), gradually as resources allow. Materials used near the most vulnerable objects will be prioritised for improvement.

For further information on harmful materials and which collection types are most at risk see the Museums Galleries Scotland advice sheet, 'The effects of storage and display materials on museum objects', and chapters 61 and 64 in 'The National Trust Manual of Housekeeping'.

If there is any doubt about the use of a certain material, Museums staff will seek advice from the Preventive Conservator in the first instance. Note: the Conservation departments at National Museums Scotland and the British Museum keep a register of materials that have been tested and can provide a testing service for materials not already on their registers.

#### **2. Construction**

##### **2.1 Seals**

To keep out dust and insects, and to maintain a reasonably airtight case/storage unit, joins in construction should be well sealed when cabinets are closed.

Museums will ensure that all new cases/cabinets are fitted with good seals. In older cases, gaps or degraded sealing (which may also give off pollutant gases) will be replaced, prioritising areas where objects are most vulnerable and taking account of available resources.

##### **2.2 RH control**

If it is not possible to control the fluctuations of Relative Humidity (RH) in a gallery or store, then display cases and storage units should be used to stabilise RH. The more airtight a cabinet or case is the more stable the RH will be. Ensuring cases are well-sealed will help this (as above).

The use of 'buffers' (such as Artsorb®, ProSORB™, Orange silica gel) will be used to create micro-climates within cases, maintaining a stable RH at a chosen level where necessary. New cases must be designed to allow a space for the insertion of buffering materials with good air exchange to the body of the case.

## Appendix 5

### Conservation procedures

#### 1. Decision making

Conservation of an object will be considered if the object is deteriorating and direct action is required to stabilise the object and slow down further deterioration. Restoration will be considered for damaged or deteriorated objects if it is decided that this will bring them to a more acceptable condition or state, enhancing their cultural or scientific value.

Remedial conservation (or restoration) work should only take place if it has been authorised by the Head of Collections, or the Collections and Exhibitions Curator. Collections staff will discuss with conservators and other relevant staff the conservation approach and treatment options to reach a mutual agreement on the action to be taken.

#### 2. Professional standards

Remedial conservation work will only be carried out by a conservator or by staff in the Collections team under specific advice from a conservator.

Any conservator or conservation practice that is contracted to provide advice or services should, where possible, be included on the Institute for Conservation (ICon) register and ideally a professionally accredited conservator should be used.

Conservators who are not ICon accredited will be used if a suitable candidate cannot be found via the register (taking into account specialism, location and cost) and on recommendation from colleagues within the museum sector.

#### 3. Treatment record

Details of all interventive conservation work on an object must be recorded on the Collections database (EMu), including treatment carried out, name of the person who performed the work, the organisation to which they belong and the date on which it took place.

Version number	Purpose / changes	Document status	Author of changes, role and school / unit	Date
4.0	General review and updates		Collections Manager, Kevin Knox Collections Care Officer (Hazards), Sophie Lenihan	01-2022
3.0	- Changed Unit name through out to reflect new internal naming of 'Museums' -Updated Policy statement and strategic aim to reflect updated		Head of Collections, Jessica Burdge	2019

	<p>Museums Strategy (section 3.1)</p> <ul style="list-style-type: none"> <li>-Updated job title throughout to reflect current structure</li> <li>-Updated external reference guideline to reflect most current advice (section 3.3.1)</li> <li>-Updated contents page as necessary</li> <li>-Removed 'Plan' section to separate working document.</li> </ul>			
2.0	General updates and review		Collections Curator, Jessica Burdge	2016
1.0	New requirement for Collections & Conservation Policy for Accreditation		Collections Curator, Jessica Burdge	2013