

Standards in the Museum Curation of Musical Instruments 2005

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Foreword

by Stanley Sadie, CBE (written for the 1995 edition)

Among the countless kinds of objects conserved in our museums, a musical instrument occupies a very special position. It was not designed to be looked at, but to be used, specifically to be played upon, to produce some sort of vibration that creates sound. Instruments were not intended by their makers to last forever, or even for very long: no one would have been more surprised than a Ruckers or a Stradivari at the longevity of their creations, let alone the value that society places upon them after some three centuries, while the craftsmen of China or Africa who created an instrument would be no less baffled at the worth ascribed to it and the care bestowed on it in an alien culture. These men and their colleagues made instruments to serve a particular cultural function which seemed to be of its time and was never envisaged as being more than that.

Today we take a different view of our own past, one that has been forming over some two hundred years, as tastes, in music as elsewhere, instead of moving with the times, have become set. The music chiefly valued by a large public today is that of the past, a selection of which has come to have canonical significance. This music was composed for instruments of the kind we preserve. The desire to preserve the instruments is a by-product not only of a civilisation that looks to its past and preserves many different kinds of artefact, but also of our interest in the re-creation of the performing traditions, and the sounds, of the period to which the music belongs. Also, as cultural boundaries have softened with the end of colonialism, the freer intermixing of cultures and the improvement in world communications, the readiness to abandon cultural insularity has increasingly fed curiosity and care about non-Western instruments. Yet the preservation of instruments of any kind is inherently enigmatic, for like other objects, they have been used, and in many cases used to destruction or at least substantial deterioration; the very act of using them places them under a kind of stress that belongs more, say, to machines than to art objects. Further, they may well have been repaired, or even modified to meet changing tastes.

To the ordinary musician, and to the ordinary listener, a musical instrument exists for only one purpose; to be played upon and to produce sound. Until quite recent times such attitudes remained unquestioned, and there are still quarters where even now they are regarded as almost axiomatic, where a silent instrument is seen as a useless instrument; and indeed the traditions of English organology (which are long and distinguished) are based in a broader tradition of antiquarianism with which such ways of thought were consistent. The historian or the conservator today, however, takes a different view, in which the chief emphasis belongs with the preservation of an instrument as a tool for future research. The diversity of approach poses dilemmas which the present publication fully acknowledges, and it provides valuable guidelines for dealing with them. A central question must remain: of what use is an instrument of the past, or of another culture, as a guide in our efforts to reconstruct the sound world of its period or provenance if we do not permit ourselves to hear it, so that we know what we are trying to recreate? And, on the other hand, how can we permit ourselves to risk destroying what we have?

There are no simple answers: except to say that to compel a long silent instrument to sound may often be to court its destruction, and that no responsible custodian can allow that unless under severe safeguards. The purpose of this publication is to establish a basis for custodianship and conservation without denying the purpose of the objects. Its

hard practicality and caution are salutary. Musicians may, in its light, have to deny themselves certain of their hopes and ambitions, but long-term considerations have to be paramount and the responsibilities of custodianship must prevail. This volume represents an enlightened collaborative statement of them and how best they may be realised.

Introduction

A. Standards

Standards in the museum care of musical instruments is one of a series, originally published in 1995 by the Museums & Galleries Commission (MGC) now updated by the Museums, Libraries and Archives Council (MLA), setting out standards in various aspects of museum work. The series also covers the museum care of archaeological, biological, geological, industrial, textiles and costume collections. They have proved their worth, and in 2005 the Standards are being revised and re-published on MLA's website.

During the revision it was felt more appropriate to refer to the processes and activities of managing and caring for collections as curation, a term which has not been fashionable for almost a decade with the advent of the more fashionable term 'manager' following administrative practice across the world. Care is just one of the tasks of curation, which can be broken down into four task areas for collections of whatever type. These are Procedural; Collection Care and Maintenance; Building and Management; and Access and Education. Consequently the Standards are presented within these same task areas.

The following pages set standards for the museum care of musical instruments and provide guidance on the interpretation of these standards. The standards were difficult to write, because museums, collections and musical instruments vary so greatly, ranging from the small local collection with specimens of relatively restricted provenance to the national museums with enormous ranges and numbers, and because so many activities go to make up curation.

The original edition followed directly from the survey of musical instruments in UK museums commissioned by the MGC and published as *Museums of Music*, one of the principal recommendations of which was that MGC should produce a Standards in the Museum Care of Musical Instruments as an addition to its Standards series. Thanks to this growing professional consensus, the Expert Group found little difficulty in agreeing on the Standards. The Group saw parallels between the care of musical instruments and that of quite different types of object: the debate over whether musical instruments in museums should be played, for example, is similar to that over whether machinery preserved in museums should be operated. The approach recommended in the current publication is also similar to that recommended in its sister publications on larger and working objects: that the decision should be based on an assessment of the object's importance and its status in the museum, and that every object which is played or worked should have its own operating manual and operating log.

The standards have been up-dated to reflect changes in practice, and changes in legislation, in particular: the Disability Discrimination Act, which came fully into force on 1st October 2004; revised Health and Safety regulations; the revised Museum

Registration scheme, now Accreditation Scheme, currently being implemented; the development of internet websites, and the new technologies available to make information relating to the task of curation arguably more easy.

These standards represent a consensus of current professional opinion of best practice and the Museums, Libraries and Archives Council believes that every museum should be aspiring to reach them. "Aspiring" is the key word. We take the pragmatic view that not all museums will be able to achieve all of them in the short-term. Some standards, on the other hand, will have to be met by all Accredited museums and those standards are incorporated. The standards for documentation, for example, are those that all Accredited museums are already committed to reaching.

Stanley Sadie, CBE, (October 30, 1930 - March 21, 2005) was a musicologist, music critic, and editor. He was editor of the 6th edition of the *Grove Dictionary of Music and Musicians* (1980), which was published as the 1st edition of the *New Grove Dictionary of Music and Musicians*

Introduction

Musical Instruments

We define a musical instrument as any object designed to make a sound, from a baby rattle to a viola, and from a fire siren to a gong.

Much work has been done in recent years to define standards in the care of musical instruments, and this publication owes a great deal to the work of bodies like the International Committee of Musical Instrument Museums and Collections (CIMCIM) of the International Council of Museums, and the Canadian Conservation Institute, as well as to individual specialists and specialist groups.

These standards will certainly change again, as techniques and expert opinion change. MLA intends to up-date them as opinion changes; in practical terms they will be reviewed every five years.

Many museums hold musical instruments for their design or social history interest, or simply for their beauty, rather than for their function. These standards take this aspect into account.

Use of the standards

The standards will be used for a number of purposes by professional curators, collection managers and others who run museums with musical instruments for bench-marking, aiding audits, ensuring correct conditions and for advocacy, for example:

- A curator/manager may be asked to draw up a schedule of objectives and performance indicators for the care of collections. This publication provides national standards against which achievement may be measured, and which can also be used for benchmarking and 'best value' exercises.
- An auditor (internal or external) may wish to review how a local authority is looking after its musical collections. This publication gives defined national standards against which achievement may be measured.
- A curator is trying to persuade a museum governing body to make more resources available for curation of musical collections. These standards will help make the case.
- A local museum run by volunteers is reviewing its acquisition policy, and is looking for professional guidance on the implications of acquiring various classes of material. These standards and guidance will help in drawing up a sensible policy reflecting the constraints posed by the museum's resources.
- A non-specialist is responsible for curating musical collections. These standards will provide an authoritative introduction to the special needs of the collections and sources of specialist advice.
- An architect is asked to design new premises for a musical instrument collection, or a designer is working on a new display or store to contain musical instruments.

The required standards of security and environmental control that should be attained are detailed here.

- A grant-giving body needs reassurance that a museum applying for a grant will use the money responsibly. These standards enable it to judge whether the museum is likely to do so.

While these standards are addressed primarily to museums, they are also intended for use by private collectors.

Arrangement

Each aspect is divided into three sections - standards, guidelines and advice, and we have tried to achieve a balance between the statement of principles and detailed guidelines.

- The standards to which every museum holding Accreditation with the Museums, Libraries and Archives Council should ultimately be aiming. Larger and specialist museums may already be meeting even higher standards.
- Guidelines and notes, explaining and enlarging on the standards, and giving the basic sources of help and advice, with references to relevant websites, publications and organisations, detailed in Annex C.

Acknowledgements and Thanks

The Museums, Libraries and Archives Council is grateful to the original Editor Crispin Paine, and MGC's Deputy Director Jeremy Warren, and members of the original Expert Group listed in the appendix who advised on the original publication.

Louise Bacon, Elizabeth Wells, Frances Palmer, Helene La Rue, Arnold Myers and Mimi Waitzman of the original group have been re-recruited to act as a peer group to the revision (details of the original Expert Group are listed in the full list of Acknowledgements at the end of this publication). Additionally, the following have advised on this current publication: Margaret Birley, Horniman Museum, and Iain Slessor, Security Adviser, MLA.

Users of these standards are warmly invited to comment on its usefulness, and to make suggestions for improvements - or even for a new approach - for further editions. Please contact MLA.

Section A Procedural Standards

1. Acquisition and disposal
2. Collections management
3. Documentation
4. Protection of primary records

Standards for acquisition and disposal

- 1.1 The museum's governing body must draw up and publish a detailed Acquisition and Disposal policy, which must be formally reviewed every five years. Ideally, it should be part of a Collection Management Policy.
- 1.2 The museum must ensure that it secures legal title to instruments, and associated objects and records that it acquires; also, wherever possible, it must ensure legal title to those it has acquired in the past.
- 1.3 Every musical instrument must be acquired in accordance with the relevant professional codes. The museum must also ensure that the acquisition of instruments does not contravene any local, national or international law, treaty or recognised code of practice.
- 1.4 The professional codes that all acquisition and disposal policies and practice should adhere to are: MLA's Guidelines for the Accreditation Scheme for Museums in the United Kingdom, the Museums Association's Code of Ethics and the International Council of Museums' Code of Ethics for Museums.
- 1.5 Fieldwork carried out by the museum's staff, or on behalf of the museum by others, must be in accordance with the recognised Codes of Practice and Guidance.
- 1.6 All museums must accept that there is a strong presumption against disposal of instruments in a permanent collection. No instrument may be disposed of other than in accordance with the code set out in MLA's Accreditation Standard and the MA's Code of Ethics.
- 1.7 A full assessment of any instrument, or associated object or record, considered for disposal must be carried out by a qualified and experienced instrument curator; if such a person is not on the staff of the museum then advice should be sought from an Accredited museum.
- 1.8 The museum's disposal and research policies must make reference to conditions and limitations on destructive research and to the powers delegated to staff concerning decisions in this area.
- 1.9 Accessioned material that has deteriorated beyond recovery may be destroyed following inspection by a qualified and experienced curator of musical instruments or accredited conservator. The decision must be approved by the governing body and full records kept, especially historical data which should go into the history file.

1.10 A collecting policy for musical instruments must include provision for documenting information about the context from which they come. The documentation must be available as part of the instrument's object file. As much information as possible must be recorded about the object. This will include not only technical information - for example a description and where possible a documented field recording of the instrument - but also details of who made it, bought it, played it, restored it or listened to it.

Guidelines and notes

Acquisition

1.11 The museum's acquisition policy should explain why the museum collects particular groups, or collects in particular areas. It should describe the historical collections held by the museum, and explain how the current musical instrument acquisition policy fits into the museum's overall policy.

1.12 Every effort should be made to harmonise the collecting policy with those of other museums collecting locally, or other UK museums collecting in the same fields.

1.13 Every acquisition by the museum should be carefully considered for its environmental and ethical implications, as well as for its value for musical appreciation or educational purposes. It is necessary to distinguish between primary i.e. field collection and secondary acquisition i.e. donation, bequest, purchase, exchange and loan.

1.14 Anyone collecting on behalf of the museum should adhere to the same legal and ethical constraints. The museum should try to ensure that other bodies and amateur groups from which it receives material are aware of, and abide by its policies.

1.15 Save in emergency, museums should collect only instruments they have the facilities and expertise to care for. No museum should normally hold instruments for which there is no qualified curator, but should transfer them to an Accredited museum with the appropriate facilities and specialist staff and a proven commitment to curation of collections of this type.

1.16 Any one instrument can be used in many different ways, for example to illustrate the particular viewpoints and interests of social history, decorative arts or ethnography. What matters is that every museum considers carefully, and writes into its acquisitions policy, its criteria for seeking to acquire musical instruments. Every instrument considered for acquisition should be measured against those criteria.

1.17 Some museums hold two distinct collections, those that may be played and those that may not; some museums accession the latter but not the former. But an object may change its status, for example because more is learned about it. A more sophisticated approach may therefore be helpful, based on regular assessment of each instrument's importance. What matters is that each museum should adopt and operate a clear policy.

1.18 Because of the pressure on curators to allow instruments in their care to be played, which inevitably causes wear and tear, and risks damage, it is important to define just why the instrument is in the museum, and to keep in mind its role and

reappraise its significance at regular intervals. See Annex B. for criteria for deciding whether an instrument should be played.

1.19 Reasons for acquiring an instrument might include:

- its character - An instrument may be worth acquiring because it is typical of its period or society, or by contrast because it is unusual.
- its appearance - It may be exceptionally beautiful, or may incorporate rich materials or elaborate decoration. It may be important in the history of art or of design.
- its manufacture - It may have been made by an important or interesting maker, or one based in the museum's region.
- its materials - It may be made from interesting materials, whether unusual or typical.
- its history - It may be associated with a particular repertoire, musician, owner or collector, or with a particular place. It may bear evidence of the way in which it was played. It may preserve an unusual amount of information about its provenance and use.
- its context - It may form part of a collection of ethnographic or social history material.
- its condition - It may be of especial interest because of its unaltered condition, or because of the historical or musicological interest of any alterations.
- its sound - It may make a particularly beautiful sound, or be considered to preserve well its original playing characteristics, or it may be wanted for demonstration purposes, to illuminate a particular repertoire.

1.20 Museums wishing permanently to exchange or transfer instruments should ensure that the practice is sanctioned by their Acquisition and Disposal Policy, and should on each occasion take the advice of a specialist in the instrument(s) concerned. Such exchanges must be fully documented.

1.21 The greatest effort should be made to acquire all available information and any associated objects with each instrument at the time of collecting, particularly where an object is removed from its context.

1.22 Relevant Codes of Practice and Guidance which should be observed in collecting include those listed in Annex C.3. Museum collections should be collected and curated in accordance with the MA's Code of Ethics and the Code of Practice on Archives for Museums in the United Kingdom, 2002 (3rd edition), agreed by the Association of Independent Museums, Museums Association and Society of Archivists. Save for documentation relating directly to their collections, museums should normally ensure that archives are deposited in professionally staffed archive offices.

1.23 The need for a register of historic musical instruments of national and international importance is being addressed and is under construction.

Fieldwork

1.24 Music is both a product and a process of social interaction. When an instrument is acquired directly rather than through the saleroom, the museum should document all available information about the instrument, its history and context. This may be a challenge where, say, the museum is acquiring an instrument for its aesthetic or technical importance rather than its social history value, but it is always vital as other aspects may become important later. The context of an instrument should be seen as including:

- by whom, how and where it was made, kept and used
- who trained the maker, and where
- what it is made of, and where the materials were obtained and prepared
- the original cost
- where, when or how it was owned and transferred
- by whom it was owned, and perhaps modified
- the history of any damage, repairs or alterations
- its use in ritual or ceremonial processes
- the social and economic background of the instrument
- the musical and artistic background of the instrument
- by whom it was played, for what music, and in what circumstances
- how it was tuned
- how it was stored when not in use
- other instruments or voices with which it was used

The documenting of the context may use a variety of techniques, including:

- photography
- film and video recording
- sound recording
- field sketches
- transcription
- reproduction (if collection is not possible) of printed and handwritten material associated with the object
- ethnomusicological field reports
- archaeological excavation
- measurement of pitch

Items associated with a musical instrument may include:

- makers' drawings, invoices, etc
- bills of subsequent sale, etc
- makers' tools
- makers' catalogues, sales literature, etc
- instruction and service manuals
- clothing
- orchestra, group or band materials such as rule books
- personal ephemera
- recordings and written music
- accessories, such as tool kits, tuning hammers and spare parts

- old reeds, broken strings, etc
- samples or details of construction materials
- patents
- trade cards, advertisements
- packaging, cases, covers, supports and carrying equipment
- concert programmes

1.25 All should be collected, and the maker, players and previous owners, or their descendants, should be approached to ensure that all information has been collected.

1.26 Where a substantial archive illustrates and enhances context, its acquisition should first be discussed with the appropriate archive service. Names and addresses of these are given on the ARCHON Directory, which includes contact details for record repositories in the United Kingdom and also for institutions elsewhere in the world which have substantial collections of manuscripts noted under the indexes to the National Register of Archives.

1.27 If the museum proposes to retain such an archive, reference should be made to the Code of Practice on Archives for Museums in the United Kingdom, 2002 3rd edition.

Disposal

1.28 Disposal is the permanent removal of objects from the museum's collections by any means (sale, destruction, exchange, or gift). 'Permanent loan' is not a recognized or permissible disposal transaction, as the term 'loan' infers that an object will eventually be returned to the collection, while 'permanent' implies that it will not be returned.

1.29 MLA's Accreditation Scheme provides guidance on disposal, including a pro-forma document layout.

1.30 By definition, a museum should have a long-term purpose and possess (or intend to acquire) substantial permanent collections in relation to its stated objectives. Each museum authority must accept the principle that there is a strong presumption against the disposal of any items in the museum's collections except as set out below.

1.31 In those cases where a museum is free to dispose of an item (eg by virtue of an Act of Parliament, or by permission from the High Court or Charity regulators) it should be agreed that any decision to sell or dispose of material from the collections should be taken only after due consideration by the museum's governing body, and such material should be offered first, by loan, exchange or gift, or – failing all these – by sale to Accredited museums, before there is any consideration of sale to other interested individuals or organisations.

1.32 In cases where there is no arrangement for the exchange, gift or private treaty sale of material, the museum community at large must be advised of the intention to dispose of material. This should be made by placing a notice in the Museums Journal. The announcement should indicate the number of objects involved, the prime objects concerned and the basis on which the material would be transferred to another institution. A period of at least two months should be allowed for expressions of interest to be made. Other interested parties should also be informed, eg The Galpin Society <http://www.galpinsociety.org>.

1.33 A decision to dispose of a musical instrument or collection, whether by exchange, sale, gift or destruction (in the case of an object too badly damaged to be of use), should be the responsibility of the governing body of the museum acting on the advice of professional curatorial and conservation staff, and not of the curator of the collection concerned acting alone. Full records should be kept of all such decisions and the instruments involved, and proper arrangements made for the preservation and/or transfer, as appropriate, of the documentation relating to the object concerned, including photographic records.

1.34 Any income received by a governing body from the disposal of instruments should be applied for the benefit of the museum collections. This should normally mean the purchase of exhibits for the collections. In exceptional cases, improvements relating to the care of collections may be justifiable; if this is the intention, advice should be sought from the Museums, Libraries and Archives Council's Collections Adviser.

1.35 All instruments and related material considered for disposal, whether accessioned or un-accessioned, should be assessed in terms of its musical, historical and cultural importance in addition to consideration of the legal and ethical issues relating to the material. This should be undertaken by an experienced musical instrument curator and/or conservator, but may also involve a specialist in the specific instrument concerned.

1.36 Musical instruments may have potential value even if they are unlabelled, unidentified or damaged. The museum's Collections Management Plan should include reference to any non-accessioned material that is retained, and should establish appropriate levels of documentation and curation. Museums may decide to retain un-accessioned material for a variety of uses, such as:

- displays
- loans for educational or other cultural purposes, for which well-provenanced material may be inappropriate. For example, a schoolteacher, an advertising agency or a film company may require just 'a musical instrument'
- source material for destructive or intrusive examination

Museums should consider the possibility that other information may later become available which will permit the instrument to be re-incorporated into the permanent collection.

1.37 However, there are collections that contain material so damaged or so low grade that its continued curation is difficult to justify. In such cases the approved procedure for disposal should be scrupulously followed after specialist advice has been taken.

1.38 Musical instruments facing potentially destructive or damaging research must be subject to the same process of assessment described above. This should include consideration of the risks involved, the effects on the instrument and the value of the results to be obtained. Non-destructive or non-damaging investigative procedures should be used wherever possible. The disposal policy should clearly state the powers

delegated to professional staff with regard to decisions concerning destructive research and potentially damaging processes undertaken on accessioned material.

1.39 The exchange of instruments with other museums and collectors is hard to reconcile with the procedures required for disposal under the MLA's Accreditation Scheme. More consideration needs to be given to this question; meanwhile where this practice is contemplated:

- all donors should be made aware of it
- the museum must ensure that it has legal powers to dispose of the instruments concerned
- the museum's Collections Management Policy must include a formal procedure for such exchanges
- every exchange must be approved by a specialist with knowledge of the type of instruments involved
- every exchange must be fully and permanently documented
- it is essential that exchanges be undertaken with full knowledge of the musical, historical and cultural importance of the instrument, and the full market and insurance value of the material to be acquired or disposed of. The advice of experts should be sought as necessary

1.40 Sorting and disposal of large collections acquired indirectly from someone other than the previous owner, whether through gift, bequest, transfer or exchange, should only be undertaken with the permission of that party or of the executors of his or her estate. This permission should normally be sought at the time of acquisition; it should be in writing, and fully recorded.

Standards for collections management

2.1 The museum's collections management plan must include a programme of curation based upon research, exhibition and conservation priorities for the musical instrument collections.

2.2 All museums with musical instrument collections must have access to the advice of a qualified and experienced musical instrument curator, and collections should be inspected on a rolling programme.

2.4 There must be a written procedure governing the moving of instruments within the museum, which must always be recorded (see section 9). Save in emergency, no instrument may be removed from the museum without consultation with the curator referred to above, after a full risk assessment.

2.5 A planned and systematic programme of training should be provided for all staff and volunteers responsible for the curation of the collections.

Guidelines and notes

2.6 Collections of musical instruments contain a wealth of information, and it is essential that all museums have access to the specialist expertise that will enable this information to be identified and maintained.

2.7 Ideally, all collections of musical instruments should have their own specialist curators. However, it is common for small museums without specialist staff to hold musical instruments, while some very small museums may have no paid staff at all. Every museum, whatever its size, has a duty of curation. The minimum standard must be a rolling programme of inspection, ideally on an annual basis. A museum which finds difficulty in meeting these standards should seriously consider the option of increasing its specialist care, or of transferring its collections to another museum able to provide specialist care.

2.8 Every collection should have a Curatorial and Conservation Assessment, covering its historical and cultural value, its curatorial and conservation needs, and identifying any particularly vulnerable material.

2.9 Thereafter, every collection should be subject to an annual inspection by a qualified and experienced curator of musical instruments, and if possible by a qualified and experienced conservator. The museum budget should make appropriate provision for the cost of these inspections.

2.10 Various condition audit methodologies are being developed, for example

- Scottish Museums Council's Condition assessment Tool (CAT)
http://www.scottishmuseums.org.uk/members_services/conservation_intro.asp
- National Preservation Office's Preservation Assessment Survey (Museum module) is currently under development -
<http://www.bl.uk/services/npo/pasmus.html>

2.11 The term 'curator' above refers to someone competent to advise on the management of collections of musical instruments. Such a curator needs to have a real expertise and connoisseurship in musical instruments. Conservation of musical instruments has developed as a separate specialism. Both the Institute of Conservation, and MLA's Workforce Development Team, can advise on qualifications.

2.12 Whatever their size, collections can only be managed effectively if they are well ordered. Even small collections benefit from a simple framework. All collections should be sufficiently ordered to permit a curator to locate specific instruments and associated material without difficulty. There are several systems in use and selection will depend on the size and nature of the collection.

2.13 All instruments and associated objects temporarily transferred to new locations, whether for the purposes of conservation or exhibition, should receive the same or better conditions of care than those housed in the museum store. These conditions are outlined in Section 3. Before a transfer is effected, a risk assessment of both the removal procedure and the new location should be undertaken.

2.14 Much of the value of musical collections lies in their integrity as collections reflecting their association with particular people at a particular time. Discrete collections should ideally be kept as identifiable entities. If a merger of collections is contemplated, it should be undertaken only after discussion with specialists in the groups concerned. It is essential to ensure that the documentation system records the original relationship.

Standards for documentation

3.1 The first requirement of every museum is to know what it has. It is vital to identify what the collections comprise if they are to be put to best use, and the time and money spent on their care is used most effectively. Documentation is all the recorded information a museum holds about its collections, including the gathering, storing, manipulation and retrieving of that information; it must be maintained to SPECTRUM standards.

3.2 The documentation system must record every movement of an object both inside, and in and out of the museum. This includes entry and exit records of accessioned instruments and of all items received in, or removed from, the museum whether as enquiries, loans or potential acquisitions.

3.3 A bound register of archival quality or a digital record must be maintained with records about all accessions, each including an accession or inventory number and sufficient information for collection management purposes. Long-term loans in must be entered in a similar way.

3.4 Every new acquisition must be accessioned promptly, and within six months at the very maximum. The museum must adopt a formal Documentation Plan with a timetable designed to address any backlog of documentation.

3.5 Each instrument and related object must be marked or labelled with a unique accession or inventory number. Such marking must be to recognised standards and not damage or deface the object. Any previous marking must be preserved or recorded, and all old labels must be preserved.

3.6 All the instruments in the collection, and any parts which might become separated, should be photographed, with especial attention given to distinguishing parts.

3.7 A catalogue must normally be maintained, bringing together all the primary information about each item in the collection.

3.8 Appropriate indexes, or equivalent information retrieval facilities, including key word searching must be maintained. These may include instrument type, period, culture of origin, collector, locality, donor and location in storage or display.

3.9 An Object File should be maintained for each instrument or collection as appropriate.

- 3.10 Back-up copies of key records must be made regularly and kept in a separate building. Back up copies of computer held records should also be kept in a separate building.
- 3.11 All destructive sampling, whether or not it leads to total destruction of the instrument, should be recorded in the instrument's documentation.
- 3.12 A Documentation Procedure manual must be maintained.
- 3.13 Current terminology is required in scientific journals, and for museums to communicate effectively with professional and amateur scientists it is important that they use, as far as possible, up-to-date terminology for instrument names. However, all names previously applied to an instrument, whether erroneous, obsolete or historical, should always be recorded within its documentation.
- 3.14 Every musical instrument should have a care plan (see 5:7).
- 3.15 Every musical instrument permitted to be played should have an Operating or Playing log (see 3.33).
- 3.16 A record should be kept of all condition checks; conservation, restoration and repair work, and of treatment against pests.
- 3.17 The context of a musical instrument should be carefully and systematically documented in the most appropriate way. The documentation should be available as part of the instrument's Object File (see 3:24)
- 3.18 As much information as possible should be recorded about the object. This will include technical information - for example a description and where possible a documented field recording of the instrument - but also details of who made it, bought it, played it, restored it or listened to it.

Guidelines and notes

- 3.19 General information and links to the major organisations holding musical instrument collections can be found on the CIMCIM website - <http://cimcim.icom.museum>
- 3.20 The minimum standards to which musical instrument collections (and all museum collections) should be documented are set out in SPECTRUM Essentials, a booklet published by the Museum Documentation Association which summarises SPECTRUM: The UK Museum Documentation Standard.
- 3.21 Title to instruments and associated material can be obtained by the use of a Transfer of Title form. This is a much more secure approach to obtaining title for the museum than a letter of acknowledgement or record of a financial transaction.
- 3.22 All the instruments in the collection, and any parts that which might easily become separated, should be photographed, with especial attention given to any distinguishing marks.

3.23 The importance of linking new documentation both to objects and to old documentation cannot be over-emphasised. Old data may be of vital historical importance.

3.24 Each instrument should have, in addition to its accession register entry and catalogue record, an Object File or series of files. The Object File provides a central location for all the information relating to that object or accession group that may accumulate over the years. It should contain at least a copy of every relevant document that exists, even where originals are held elsewhere (except where there is so much that the practice becomes impractical). The contents will vary according to the instrument and its museum use, but may include:

- drawings, specification documents, makers' instructions, etc, as originals or copies
- film, tape, video records, CDs or DVDs of the instrument being played
- interviews with makers, players and owners
- correspondence
- details of all research findings about the object and its relevant original context, particularly information on any discoveries about its manufacture and use made during conservation or restoration in the museum
- copies of the instrument's care plan and playing log
- conservation details, restoration and repair records
- copies of any loan agreements, and of correspondence concerning the object
- photographs or other form of imaging of the instrument
- published references to the object

3.25 In addition to the documentation required by all museum objects, musical instruments have special documentation needs.

3.26 New or reproduction parts fitted to an instrument should be recorded and, wherever possible, should be permanently marked, preferably with the date and the museum's name

3.27 Where a museum maintains two distinct collections of musical instruments, one for permanent preservation and one for playing, it should develop documentation and marking systems to prevent the two becoming confused. This should include central written records of what items are held and the reasons for acquisition, and a location record.

3.28 When larger instruments, such as organs, have to be held in museum stores in a disassembled state, the information held in the catalogue becomes particularly important.

3.29 The care plan sets out the programme of care agreed between conservator and the staff or volunteers who are to carry it out. It should include an assessment of the instrument's condition when received, the action required, materials to be used and timescale, and should cover basic cleaning as well as more invasive treatment. For instruments to be played, the care plan should also set out the rules and conditions for playing.

3.30 Where a museum lends out instruments, the documentation procedures to deal with the management of loans in and out of the collection becomes particularly important. These procedures should be capable of accommodating the considerable amounts of information and special agreements that are frequently necessary to record the loan of an instrument, particularly in what circumstances it is to be played (see 2.6 and 4.18).

3.31 Objects may leave the museum for a variety of reasons, not only as loans - for example when they are played elsewhere or demonstrated at a lecture. Such events become part of the ongoing history of the object, in addition to being a collection management concern. It is essential that an exit record be made.

3.32 The following terms have been adopted for this publication and are recommended.

Object File

The Object File (or series of files) supplements the museum's catalogue entry, and is the repository for other information about the object in correspondence, notes, press cuttings, curatorial and conservation reports etc. The Object File of a large object should contain copies of its Conservation/Maintenance Plan and Conservation/Maintenance Record, and - if it is a working object - also copies of its Operating Manual and Operating Log.

Object Files need to be accessible by accession number.

Care Plan or Conservation/Maintenance Plan

Sets out a programme of care for each individual object

Conservation/Maintenance Record

Records all work carried out on each object, whether routine maintenance work, cleaning or active conservation or repair.

Operating Manual

Where the object is to be worked, the Operating Manual gives instructions on how to do so.

Operating or Playing Log

Where the object is worked, the Operating Log records all operations. It may overlap with, or even be combined with, the object's Conservation/Maintenance Record.

Standards for protection of primary records

4.1 Records, including paper, photographs, micro-form, magnetic tape, diskettes, CD-ROMs, DVDs and other storage media should as far as possible be kept to appropriate environmental standards.

4.2 Photographs should be kept to the standards set out in Museums, Libraries and Archives Council's Standards in the Museum Care of Photographic Collections (online 2005?).

Guidelines and notes

4.3 Most collections of musical instruments will attract related collections of notebooks, photographs, publications, maps, film, video, CD-ROMs, DVDs, computer records, field notebooks, tape recordings and makers' catalogues. These primary records are distinct from the museum's own documentation. They need, however, the highest standard of preservation, for they comprise a vital element of the museum's musical collections.

4.4 As far as possible, primary records should be duplicated so that the originals are handled as little as possible. One set can then be stored in a different building.

4.5 The museum should aim to maintain all records to the standard set out in BS 5454(2000), the British Standards Institute recommended standard for the storage and preservation of archival documents (first published in 1977, revised in 1989, and again in April 2000); also the National Archives Standard for Record Repositories based on BS 5454 - <http://www.nationalarchives.gov.uk/archives/framework/pdf/standard2004.pdf>.

4.6 The physical format of records created by the museum should be, as far as possible, of proven archival quality. Back-up and security copies of key records should include entry records, accession records, catalogue records and current exit records. These should be on paper or other medium of proven archival quality, should be made regularly, and should be kept in a separate building. Back-up computer records should similarly be maintained.

Section B Collection Care and Maintenance Standards

5. Conservation
6. Care of instruments permitted to be played
7. Protection from physical damage, and health and safety standards
8. Protection from dust and dirt, pollutants, pests and light
9. Moving musical instruments

Standards for conservation

5.1 The museum's collections management plan must include a programme of care based upon agreed conservation priorities for the collection, including allocation of sufficient financial resources.

5.2 The museum must have a preventive conservation strategy that ensures that instruments are stored and handled correctly. Remedial conservation practices that stabilise damaged instruments, or reduce risk, should be part of the strategy.

5.3 Every museum with musical instruments in its collection should have access to the advice of a specialist curator and conservator.

5.4 There should be a strong presumption against carrying out any work on an instrument. No work should ever be carried out on an instrument without the approval of a qualified conservator and of a specialist in that type of musical instrument. This includes surface cleaning.

5.5 Any work carried out must adhere to professional guidelines and codes of practice, such as those of the Institute of Conservation (Icon), the Museums Association (MA) and the International Council of Museums (ICOM).

5.6 Everyone responsible for the care of musical instruments should undertake regular and appropriate training.

5.7 Every musical instrument should ideally have its own care plan, with the priority being for every instrument that is to be played. The care plan should set out a programme of conservation and curatorial care, based on the latest assessment of the importance of the instrument and its status in the museum. This assessment and the programme of care must be reviewed regularly. The care programme for each object should start with research into its materials, composition, condition and history.

5.8 The collections should be regularly audited. Four types of audit are necessary:

- can the instruments on the register be accounted for? This can be achieved by selecting instruments at random from the register and physically locating them
- are the instruments deteriorating? This can be discovered by a condition survey (see 5:8)

- are the instruments catalogued, or at least accessioned?
- are the environmental conditions in which the objects are displayed or stored appropriate for the preservation of the collections? This is ascertained by an environmental survey (see Section3)

Guidelines and notes

5.9 All museums holding even a few musical instruments should have access to curatorial and conservation expertise. Museums with more than a few musical instruments in their collection should have sufficient appropriately trained and experienced curators and conservators, either on their staff or regularly available, to fulfil the functions set out in these Standards. The benefit of appointing specialists to manage collections cannot be overemphasized.

5.10 Preventive conservation practices ensure that specimens are stored and handled correctly. Instruments can deteriorate if not stored in suitable conditions and control of the storage environment is crucial.

5.11 All museums holding musical instruments should have access to appropriately trained curators and conservators. The benefits of appointing specialists to manage collections cannot be overemphasised.

5.12 A risk assessment should be undertaken and reviewed annually. It should cover storage and display conditions, handling and (if relevant) its usefulness for playing.

5.13 All instruments temporarily transferred to new locations, whether for the purposes of conservation or exhibition, should receive the same or better conditions of care than those housed in the museum. These conditions, as they apply to environment, handling, packing, transport and security, are outlined in 2:8 and 3:11.

5.14 A systematic and consistent record should be maintained of all observations on, and publications relating to, an instrument, as well as details of investigative cleaning and remedial conservation. A record of all work undertaken on an instrument should be kept in its History File.

5.15 Each instrument's care plan should contain a written assessment of its cultural value and museum purpose, along with a written care programme for the instrument. The care plan should be kept in the object file (3:24). A regular review, at least every five years, should be made of both the assessment and the care programme, as the status of an object is likely to change over time.

5.16 Every museum will devise its own approach to caring for its collection, taking specialist advice where necessary.

5.17 Museums should show restraint with all the instruments in their collections and allow only the minimum conservation work necessary to enable an instrument to fulfil its agreed role in the museum. Even surface cleaning (eg with a duster) should be undertaken only after advice has been taken from a specialist curator or a conservator. It is impossible to return an instrument to any former condition without obliterating some

evidence upon it, however slight, and as our analytical techniques and regard for the functional history of the object become more sophisticated we are obliged to leave as much evidence of usage upon the material under our care as is possible (Eliason and Hellwig 1986).

5.18 When there is any consideration of work being undertaken on an instrument, the museum should follow the advice of both a conservator and a specialist in that type of instrument.

5.19 It is important to be aware that the conservator submitting the lowest tender for a job may not be the most suitable person to undertake the work.

5.20 Most musical instruments were maintained, adjusted or reconditioned while in use. They thus acquired a battery of accretions and modifications that are part of their history. These very slight changes (which may now be almost undetectable) are of particular interest to scholars and players alike, since they throw light on the use of the instrument. It takes expertise and experience to recognise and evaluate these accretions, which can easily be swept away with injudicious work.

5.21 At present, there are very few conservators with a special expertise in musical instruments in the UK, though there are a number of very distinguished instrument restorers. To provide a definition of the different approaches: conservators aim to arrest and prevent deterioration, while restorers aim to return something either to playing condition, or back to its conjectured state at some earlier time. Museums are concerned with conservation rather than restoration, and they need to be sure that the specialist whose help they are seeking takes that approach too. Some of the best restorers are both willing and able to take a museum-orientated approach if asked to do so, and can help with or advise on conservation requirements. Moreover, many conservators who specialise in general object conservation can assist with musical instruments.

5.22 In particular, a museum considering having an instrument restored to playing condition, or to an earlier appearance, should first consult one or more specialists in that class of instrument. A museum should not put a professional restorer in the invidious position of advising on whether the work should be done, and perhaps having in conscience to forgo profitable work.

5.23 Restoration to playing order should only be contemplated if the museum has good environmental conditions, consistent and regular maintenance by expert staff, and the prospect of real benefit to the legitimate work of the museum. See Annex B. for criteria for deciding whether an instrument should be played.

5.24 Musical instruments may themselves be, or may incorporate, works of art of a very high order. For example, many Western keyboard instruments incorporate important paintings. It is vital that any conservation work carried out on such a work of art is undertaken by an appropriately trained and experienced individual. Advice on sourcing the services of an appropriately-qualified conservator can be obtained from the Institute of Conservators <http://www.instituteofconservation.org.uk/>.

5.25 Ongoing training and professional development are the most direct ways to improve the quality of a museum's activities. It is important that all members of staff and volunteers have access to training opportunities. A wide variety of training is now

available in the UK in the care and conservation of museum collections in general, but so far little formal training is available specifically in the care of musical instrument collections. However, specialist advice is available from <http://www.instituteofconservation.org.uk/> and CIMCIM <http://cimcim.ibom.music>. At several British Universities, students can learn from university collections.

5.26 An understanding of the difference between conservation and restoration, and treatment terminology, is essential. An explanation of terminology is given on MLA's website <http://www.mla.gov.uk/information/advice/conserv17.asp>.

Standards for the care of musical instruments permitted to be played

6.1 Only instruments that have been designated as suitable for playing should be played.

6.2 An instrument should be played only in accordance with its care plan. The care plan should state how, how often, for how long, in what circumstances and by whom it may be played.

6.3 Played instruments should be inspected at regular intervals. Any perceived deterioration should lead to a review of whether they should continue to be played.

6.4 A playing log should be kept for every played instrument, containing details of each occasion on which it is played.

6.5 Instruments to be played regularly must be maintained to playing standard.

6.6 A policy which permits playing should only be adopted if the resources, including specialist staff, are in place to implement it.

Guidelines and notes

6.7 For detailed information and guidance, see Annexes A & B.

6.8 To quote J R Watson, abstracted in CIMCIM, 1993:

'There exist two often opposing views about the use and preservation of antique musical instruments. According to the first view, it is the destiny of all musical instruments to play music. Old instruments are often among the best instruments for playing. According to this point of view, preservation is accomplished most effectively through playing. Leaving an instrument permanently silent is thus absurd.

The other view holds that our obligation to preserve old instruments is served only by protecting them from intrusive restorations and physical deterioration from use. Historical instruments are, in effect, primary documents detailing historical instrument making techniques and technologies. This carries

implications about the usefulness of non-playing antique instruments, and the destructive effects of restoration and use. Supporting evidence is offered from the example of keyboard instruments. In a solo keyboard work, a key near the middle of the range is likely to be struck over two thousand times in every hour of playing, and with each strike of the key, a chain reaction of abrasive forces is unleashed...'

Antique musical instruments, especially those retaining substantial historic integrity, are a non-renewable and diminishing cultural resource - an endangered species. If we allow preservation to be secondary to musical performance, the legacy will be spent, the species extinct'.

and CIMCIM 1985:

'The use of any museum instrument is connected with a clear risk of mechanical damage. The stresses generated by tuning a stringed instrument or those caused by introducing moist air into a wind instrument cannot be calculated in advance and may easily be more than the instrument can withstand. It is easy to abstain from bringing a stringed instrument up to working pitch, thus avoiding potentially dangerous situations. There is no similar buffer against damage caused by blowing into a wind instrument.'

6.9 The balanced view is that certain museums with suitable instruments, adequate resources and well-defined aims may allow limited playing of certain chosen instruments without seriously compromising the museum's obligations to preservation. Such playing can be valuable in education and research.

6.10 However, there should always be a presumption against the playing of musical instruments from museum collections. Where instruments are permitted to be played, they must be played only according to the strict rules set out in their care plans. The categories set out in Appendix C may be a helpful guide.

6.11 Historic instruments may no longer sound as they originally did, so a good copy or reproduction may give a truer approximation of an historic instrument's original sound. The production of measured drawings and copies of museum instruments will reduce demands that historic instruments be restored or played.

6.12 However, if it is considered that the benefits of playing an historic instrument may justify the risk, there are several ways to reduce danger:

- a risk assessment should be undertaken both before a final decision is taken, including how often it should be played, how long it should be played on each occasion, and who may play it; a risk assessment should be made for each instrument, and each type of player
- the number of times an instrument is played can be reduced; the playing should be recorded;
- sometimes, though, it may be safer to maintain an instrument in playing condition, rather than subject it to the shock of preparation for occasional playing

- the reasons for playing an instrument should be limited: playing for personal curiosity or pleasure may be forbidden, and playing limited to research, recording, or the rare public concert
- CIMCIM recommends: Any performance use of an instrument should be designed to reach as wide an audience as possible. Recordings and broadcasts are, therefore, generally more to be encouraged than are concerts alone (CIMCIM 1985)
- players can be limited to those who are experienced and knowledgeable, and who are known to take particular care of instruments; some of the most distinguished artists can have the least respect for old instruments, and selection of performers is a conservation decision
- the location where an instrument is played can be controlled: allowing an instrument to be played only on the museum's premises ensures the museum's control over playing, security, environmental conditions and after-care
- how an instrument is played can be controlled: some instruments can be played gently to ensure the least wear (on a keyboard instrument, for example, slow music causes less wear than fast)
- how long an instrument is played can be restricted
- a conservator can check the instrument immediately before and after use

6.13 To bring an instrument into playing condition suddenly may cause considerable damage. Very occasionally, a decision may be made to make a recording of a normally mute instrument: on such occasions it should be brought gradually and carefully, over a period of weeks or even months, to tension and accustomed to playing. Parts such as strings, quills, bow hair, skins, pads and springs must not be replaced unless allowed for in the instrument's care plan. A conservation decision, and adequate supervision by curator and conservator are essential.

6.14 However, regular playing will inevitably lead to wear on parts such as fingerboards and the balance and guide points of keys. Sometimes such wear can be prevented by covering the vulnerable part with a protective replaceable surface. At other times the wear can be pre-empted by replacing demountable parts with new copies. Any original part that is removed should always be retained in the museum's collection and marked appropriately (see 1:3).

6.15 Where it is judged desirable to obtain data on the tuning and tonal characteristics of wind instruments, an apparatus for sounding them without human breath can be employed, and the results recorded. Advice can be obtained from musical instrument collections, eg. the University of Edinburgh <http://www.music.ed.ac.uk/euchmi/>.

6.16 New or reproduction parts fitted to an instrument should wherever possible be clearly marked to show the date of manufacture and the museum. Such modifications should be fully documented.

6.17 If possible, a recording should be made of a museum instrument that is rarely played.

6.18 It can be very expensive to keep instruments in playable condition. In financial terms, they never 'pay for themselves'.

6.19 Regularly, and at least every five years, the care plan of each instrument should be reviewed, with advice from curator, conservator and specialist historian: a risk assessment should determine if it is to be played, and if so, how often, for how long on each occasion, and who may play it. This review may well lead to a decision that the instrument should be played less frequently, or not at all; for example, either because it is becoming too delicate or because its importance is judged to be greater than previously appreciated.

6.20 For guidance and assistance in dealing with the technical aspects, see Barclay 1997 and 2004 (details in Annex C).

Standards for protection from physical damage to instruments, and health and safety standards

7.1 Musical instruments should be regularly inspected for pest damage, and for any signs of physical or chemical deterioration. Reports based on these inspections should be recorded in the object's documentation.

7.2 Unless an instrument is not identified as playable, or capable of being returned to playing condition, it should never be played.

7.3 All instruments must at all times receive adequate physical support and minimum stress.

7.4 Packing and support materials must be appropriate, of conservation grade, and must not affect the instrument in any way.

7.5 The handling and movement of instruments must be kept to an absolute minimum; many musical instruments are fragile and prone to being scratched and marked.

7.6 Suitable equipment and adequate space must be available for the safe moving of instruments.

7.7 Instruments must be protected from physical shock and vibration.

7.8 Instruments must be kept separate from each other to prevent abrasion.

7.9 Light levels must be controlled (see section 2:8)

7.10 Staff, researchers and volunteers must be trained in the handling and moving of instruments, and must be aware of potential risks and dangers both to the instruments and themselves.

7.11 Appropriate procedures to prevent accidental damage must be agreed and followed.

7.12 The Museums Association's 'Guidelines on Security when Using Outside Contractors' should be observed.

7.13 Eating and drinking should not be permitted in collection areas.

7.14 All museums must comply with relevant legislation.

7.15 Museum staff and volunteers must be adequately informed and trained concerning risks to health and safety posed by the instruments and other museum items with which they may work.

7.16 All objects must be positioned and protected so as to minimise the risk of direct physical injury to the handler.

7.17 All containers or wrappings must carry labels identifying their contents, and listing any safety hazards they may pose when being moved or unpacked.

Guidelines and notes

7.18 Faulty procedures and high risk situations are to be found in both small and large institutions. Every museum should periodically re-examine procedures, eliminate incompetent handling and hazardous activities and introduce training programmes for all categories of personnel involved.

Storage

7.19 Many musical instruments are exceptionally delicate objects, and are prone to damage even when at rest.

7.20 All instruments containers or wrapping should be clearly labelled so that the contents can be identified without unpacking.

7.21 Appropriate packaging using conservation-grade materials should support and protect instruments and related objects whilst allowing them to be readily accessible. It should be possible to undertake an initial examination of an instrument without removing it from its packaging or handling it directly.

7.22 Small instruments should be stored in nests of acid-free tissue paper in acid-free boxes or in freely running drawers, or else in specially cut slots in Plastazote (closed cell expanded polyethylene). Instrument cases may not always provide a satisfactory (e.g. acid free) environment for long-term storage, but should themselves be treated as valuable museum objects.

7.23 Drawers that stick can damage brittle objects; candle grease on the runners can help. Drawers should be regularly checked as part of the routine collection maintenance,

7.24 Large and heavy instruments should be marked with their weight and rest on pallets. Pallets should be larger than the instrument, in order to provide protection from knocks. Where possible the instrument should be strapped to the pallet, separated by inert polyethylene. Plastic pallets are preferred: if timber pallets are used, they should be checked for harmful emissions, woodworm and dry rot. Instruments should be covered with dust sheets of unbleached, undyed cotton or calico, or appropriate specialised museum fabrics eg Tyvek. Instruments should be moved on trolleys with pneumatic tyres.

7.25 Shelving should be strong enough, and wider than the boxes to be placed on it; if boxes overhang they can easily be knocked off. Stacking of boxes or trays should be avoided. Heavier objects should be placed on lower shelves to reduce risk of damage or injury when removing them.

7.26 Roller racking should be operated carefully, as sudden jolting when stopping and starting can cause damage to objects.

7.27 Floor loading should conform to BS 6399: Part 1, British Standard Design loading for buildings: Part 1. Code of practice for dead and imposed loads. Museums with heavy instruments should ensure that the floor loading is adequate. Point loading may in some instances exceed the limits recommended.

Handling and inspection (for study, photography, drawing, measurement etc)

7.28 The museum should define the amount of handling permissible for each instrument, taking account of its fragility, rarity, aesthetic, educational value and the potential risk of damage. In every case, the museum will need to balance reasonable use and preservation. Both before and after handling, the conditions of instruments should be checked and recorded.

7.29 Musical instruments should always be handled with cotton or disposable plastic gloves, as appropriate.

7.30 Staff should always handle instruments carefully and ensure that they are fully supported whenever they are being held.

7.31 When a small instrument is being studied, it should be placed on soft padded blankets and padded packing blocks. If not available, then conservation-grade expanded polyethylene or acid free tissue should be used.

7.32 If it is necessary to lift the instrument, this should always be done over a soft surface, to reduce the risk of damage should it be dropped.

7.33 'Blu-tak', tape or plasticine should not be in direct contact with instruments, as they stain and detach loose surfaces.

7.34 Items used to study or record instruments, or worn by the handler, e.g. jewellery, watches, scissors, pens, lights, cameras or lens caps, can damage instruments. Care should be taken to prevent physical damage from these items.

7.35 Museums should establish a procedure for dealing with damage and breakages. When an instrument is dropped, a search should be made in case any small pieces have been dropped from the instrument.

7.36 The taking of measurements, for example by researchers or the makers of working copies, can pose dangers to instruments. Strict guidelines should be laid down for such researchers and strict supervision exercised. These guidelines should include:

- no sharp-edged tools, whether plastic or metal (the researcher's tools should be inspected)
- no parts should be removed without specific approval
- no rubbings without specific approval
- no adhesives, moulding compounds or any other substances should be used without the supervision of a conservator
- profile gauges should not be used without specific approval, and then with great caution
- only reflected light or cold lamps should be used for photography, not lamps that generate heat
- electronic measuring instruments, X-ray or MRI scanning techniques should be encouraged, in place of rulers and callipers
- taking a rubbing with soft crayon or cobbler's heelball can be as effective as, and less dangerous than, taking many measurements

7.37 Cleaners working in the museum should always be under curatorial supervision, and should receive appropriate training.

Display

7.38 The physical security or integrity of an instrument should not be sacrificed for a dramatic design effect.

7.39 Instruments and their mounts must be protected from vibration caused, for example, when people walk across the floor or knock the case. Glass shelves should be treated with suspicion or avoided. Objects on glass shelves can 'walk' if the shelf vibrates.

7.40 The mounting technique should be carefully devised to avoid any risk of damage to the instrument. For example, thread should be padded to prevent it cutting into surfaces, and pins should be covered with an inert material.

7.41 Instruments should not be allowed into the exhibition areas whilst preparations (eg carpentry, electrical work and painting) are being undertaken.

7.42 Dangerous and careless cleaning and dusting procedures on and around instruments on display can lead to physical damage. Cleaning staff should receive regular training.

7.43 Display mounts should provide maximum support to the whole instrument, taking account of its weight and centre of gravity. Support is greatly to be preferred to suspension. The use of monofilament line to suspend instruments on display is undesirable; if lines are to be used, they should be of substantially greater breaking-strain than the weight of the instrument, should always be well padded, should be tied in

the special non-slip fishing-line knot, and should never pass over sharp edges. Since light degrades nylon, monofilament lines should be replaced regularly.

Needs of specific instruments

7.44 The following notes draw attention to some of the dangers to which different types of instrument are susceptible.

Stringed instruments

- instruments that are seldom or never played should not be kept at playing tension; strings should be under very little tension, yet should lie flat and straight in their correct places
- generally, strain should be relieved wherever possible; thus, the hair of bows should be relaxed, as should the action of harps
- stringed instruments with necks should always be supported, at the very minimum at both the base and the neck; they should be supported in this way both when on display or in store, and when being lifted

Woodwind instruments

- woodwind instruments, especially those of boxwood, are very susceptible to distortion ('bananaing') if not properly supported throughout their length; Instruments such as flutes should be supported at the very least at three points when on display, and in store should be supported throughout their length
- moist warm breath can cause severe damage to wind instruments; the strictest care should be taken to ensure that rules governing their playing are observed
- the lappings of woodwinds should be left slightly loose to allow dimensional change in the wood; special care is then needed when moving such instruments
- separate sections should always be individually supported
- bagpipes should be supported and laid flat, not suspended

Keyboard instruments

- the greatest care should be taken in opening harpsichord and piano lids, some of which have complicated arrangements of hinges and catches; appropriate lid-props should be ready, and should be correctly placed; lids should normally be closed when the museum is shut; nothing should ever be placed on lids
- care should be taken not to jolt legs and stands, which may be weak
- many keyboard instruments have handstops, pedals, knee-levers and so on, which are easily damaged by people not familiar with their function; these stops should always be left disengaged
- moving parts that can be relieved of strain should be: for example a sostenuto mechanism should not be left engaged
- the buff stop should not be left engaged, as this may damage the strings or the buff pads

Metal instruments

- metal instruments should only be handled wearing disposable vinyl, latex or nitrile gloves; perspiration from bare hands can rapidly etch metal, especially brass and silver
- metal instruments should always be supported throughout their length; they should never rest on their bells
- never polish or lacquer a metal instrument without consulting a conservator

- valves, keys or slides should not be operated unless they are known to be in good condition; if an instrument is to be played, the mechanisms should be lubricated, and thoroughly cleaned after use

Drums

- drum heads should be kept slightly relaxed, as long as this can be achieved without danger of damage
- drums should be stored and handled so that drum heads are not exposed to sharp points
- the heads of drums on open display should be covered

Bells

- bells should not be rung or struck; clappers can damage bells with fragile interiors
- bells should never be polished or lacquered
- bells in a museum should normally rest on their rims rather than be hung, but in such a way that the clapper does not scrape the rim or the ground

Electronic instruments

- electronic instruments should never be left plugged into the mains
- all batteries should be removed when exhausted, or before the instrument is stored, and disposed of appropriately
- an instrument permitted to be played should be checked by an electrician before being switched on after a period of disuse
- operating voltages should be checked before the instrument is plugged in

Organs

- the leather parts of the bellows should always be checked for suppleness before an organ is pumped
- no mechanism should be operated unless it is known to be in good condition
- before an organ is played, careful consideration should be given to the quality and humidity of the air to be blown in

Automatic instruments

- spring mechanisms should if possible be kept unwound: no spring mechanism should be wound unless it is known to be sound, or unless it will be unwound again quickly and completely
- an instrument that creates a plucked note, such as a musical box, should only be stopped at the end of the tune, so that no tooth of the comb is left bent
- no mechanism should be operated unless it is known to be in good condition

Health and Safety

7.45 Although these Standards are principally concerned with the protection of objects, the museum's first responsibility is to protect people, and the two needs must be included in one policy and practical approach.

7.46 Risk assessments should be undertaken of the potential dangers posed by instruments to people. These to cover handling, display and storage. They should be recorded.

7.47 Where instruments are to be played or examined closely, care should be taken to ensure that loose ends of strings, sharp pins and pegs, and other similarly hazardous objects, are protected or tucked away safely.

7.48 Specific hazards to be found in musical instruments are:

- instability: unstable instruments should be securely mounted using materials that are sufficiently strong to bear the load
- inadequate space: instruments and showcases should be sufficiently spaced to allow people to pass without having to push against them
- electrical and electronic instruments can be dangerous: they should always be unplugged and their batteries removed when not being played, and should be fully checked before being played
- instruments may have been treated with insecticide, which could seriously affect a player
- the strings of stringed instruments can be dangerous if they break
- the springs of many clockwork instruments can be very powerful
- whistling arrows from certain cultures may have been treated with poison
- horn instruments or parts may carry anthrax
- piano lids and fallboards can be insecure; upright pianos can topple
- bells, if hung, can fall
- old paint and the corrosion salts of lead can be very toxic
- reeds and mouthpieces can be insanitary

7.49 A wide variety of health and safety legislation applies to museums, and serves to help protect visitors, volunteers and staff.

Standards for protecting musical instruments from dust and dirt, pollutants, pests and light

8.1 Instruments must be protected as fully as possible from dust and dirt. Basic protection is provided by storage in showcases, drawers or cupboards, or covering with dust sheets.

8.2 All collection and storage areas must be kept clean and tidy. A regime for regular cleaning and record-keeping should be drawn up and implemented. Maintenance, monitoring, cleaning, pest control or related work should be undertaken or supervised by fully trained and experienced people.

8.3 Objects must be protected from contact with harmful substances such as gases, fumes or other pollutants.

8.4 All harmful, biologically-active agents must be eliminated from collections and all other areas within a museum building.

8.5 Cleaning of objects should be as gentle as possible and must be undertaken by trained people; the need for it should be reduced to a minimum.

8.6 Dust and dirt should only be removed when it has been clearly determined that it does not itself form part of an instrument's history.

8.7 All sensitive materials must be protected from excessive exposure to all sources of light.

8.8 Visible and ultraviolet radiation should be kept at or below those shown in ?xx

8.9 The period of exposure to light must be kept to a minimum, as damage by light is cumulative.

8.10 Eating and drinking should not be permitted in collection areas.

Guidelines and notes

8.11 Dust and dirt encourage corrosion by attracting and holding moisture. They can act as a catalyst for other chemical reactions such as fading and corrosion, and as an abrasive that may cause abrasion or scratching of an object when it is cleaned. They may also cause mould growth, and attract pests.

8.12 However, dirt acquired during the instrument's playing life may itself be part of the instrument's history. It is possible, for example, to discover much about the playing technique from the dirt marks on an instrument. It is necessary to distinguish between dirt acquired through use, and dirt accumulated afterwards. Instruments should only be cleaned after the careful research has been undertaken:

Prevention of dust and dirt

8.13 Dust can originate from both internal and external sources. Good housekeeping and simple preventive measures can reduce levels of dust and dirt to a minimum. Special precautions, such as temporarily relocation of the collection, are advisable during even minor building work. Windows should be close fitting and kept shut, and concrete floors covered or sealed. Many Western instruments were originally supplied with cases or covers; the provision of case-covers for keyboard instruments is very desirable. All instruments in store should be boxed, cased or protected by dust sheets. There should be large loop-piled doormats at the doors to store-rooms, as well as at all entrances to the building.

Cleaning of premises

8.14 A regular and effective cleaning regime should be drawn up and implemented in consultation with a conservator.

8.15 Wet cleaning should never be permitted in the vicinity of instruments.

8.16 Indoors, all surfaces should be vacuum cleaned (not swept), using vacuum cleaners with ultra-fine filters; they should conform to Section 2.2, Supplement 1 in BS 5412: Specification for Type H Industrial Vacuum Cleaners for Dusts Hazardous to Health. Filters should be cleaned and changed regularly. (See *also* Note at 10.32 on HEPA filters)

8.17 Only materials approved by a conservator should ever be used, as some cleaning materials give off damaging chemicals.

8.18 All curtains, dust-sheets in use should be washed regularly.

Pollution

8.19 New building work and redecoration can introduce contaminants such as dust, solvent fumes or large quantities of moisture, which are potentially harmful to objects. Action should be taken to remove dust, excess moisture and other contaminants before collections are re-housed following such work. Whenever possible, a newly-decorated space should not be used to house objects until tests demonstrate that emissions have been reduced to acceptable levels.

8.20 Building and finishing materials give off particles (eg sawdust and concrete dust) and vapours (eg ammonia and water), especially during and immediately after application. This may continue for some months; good ventilation will speed the process. Surface drying can be speeded up by using appropriately-sized industrial dehumidifiers. As soon as practical after drying out, all porous surfaces should be sealed. Duct grilles should be covered with polythene during building work or redecoration.

8.21 Concentrations of external pollutants such as sulphur dioxide, ozone and nitrogen oxide, as well as smoke, dust and deposits from diesel fumes, can rise to high levels in city air. These cause fading and degradation of organic materials, deterioration of inorganic materials, and particulate matter, resulting in staining and soiling. The ingress of pollutants can be reduced by draught-proofing doors, sealing windows, and displaying and storing objects in sealed containers. The reduction of pollutants can be carried out efficiently by air-conditioning plant that incorporates particle filters or activated charcoal filters.

8.22 Many inorganic and organic materials are affected by gases, organic vapours and other compounds emitted by construction or display materials such as manufactured boards, natural fibres such as wood felt, fire retardant coatings, recently applied paint and adhesives, and some hardwoods including oak. Time should be allocated in the planning stages of any work for the testing of materials prior to use.

8.23 All materials used for the display, storage or transport of objects should be tested by a recognised method before being used in close proximity to objects.

Pest Management

8.24 Biologically-active agents include rats, mice, birds, insects, fungi, algae and bacteria.

8.25 Regular inspections and maintenance procedures are required to ensure that such agents remain inactive. Procedures should be in place for the quick and effective eradication of pests should an outbreak occur.

8.26 All incoming instruments, together with their associated packaging materials, should be inspected for the presence of biologically active agents before being introduced to the main storage or display areas.

8.27 The storage and use of pesticides is controlled under the Control of Pesticides Regulations, 1986. Remedial treatments using pesticides to eliminate any biological pest

should be minimal, in order to reduce the potential risk of damage to objects, the environment, and to staff and visitors.

8.28 A range of pest fumigation methods have been developed in recent years (replacing those that involved the use of methyl bromide, now banned). These include heat treatment, freezing and the use of gases such as carbon dioxide or nitrogen. The advice of an experienced conservator should be sought before taking a decision to use any of these techniques.

Cleaning of objects

8.29 Advice from an experienced conservator should be taken before any form of cleaning is undertaken.

8.30 A risk assessment, and subsequent agreement of the appropriate cleaning method, for each instrument should be based on an appreciation of its importance and condition. The assessment and agreement should be recorded in the object's documentation. Cleaning should be undertaken only by appropriately trained and supervised staff.

8.31 Dusting is such a common household activity that its danger to museum objects is often unrecognised. Dusting can scratch objects, cause breakages, stir up more dust than before and encourage corrosion. Vacuuming is therefore always preferable.

8.32 The use of a vacuum cleaner together with a brush can help prevent the dust being removed from settling on adjacent objects.

8.33 The instrument to be cleaned should be moved as little as possible, and must be stable.

8.34 Textiles, or friable or loose materials, such as old paintwork or veneer, should be cleaned only with the guidance of a conservator.

8.35 No wet cleaning should be carried out without the direct guidance of a conservator.

Light

8.36 Both daylight and electric light may be used to illuminate displays, but all light must be controlled because both visible and invisible light can cause damage to materials, leading to fading, discolouration, and long term structural damage.

8.37 Both natural and electric light sources produce heat, which can damage instruments: for example metal objects will expand as their temperature increases, which may lead to permanent distortion, or displacement of their coatings or inlays. Sharp or repeated fluctuations of temperature are particularly damaging and are to be avoided. Ideally, all lamps should be dimmable.

8.38 Some minerals are highly sensitive to light, and should be permanently kept in complete darkness. When instruments are under examination, their exposure to light should be kept to a minimum. All electric lamps should ideally be dimmable.

8.39 Ultraviolet light levels can be effectively reduced by the application of a protective film or varnish applied to windows and/or lamps. These films have a limited life and require regular replacement. They should be checked with a hand-held UV meter or by checking their transmittance with a spectrophotometer before application, and by checking at regular intervals that they are still effective. Tungsten lighting is safer than fluorescent because it contains little ultraviolet.

8.40 Length of exposure is as important as the level of illumination when assessing the possible damage caused by light. Measuring exposure in lux-hours using an integrated light-meter provides a more accurate record of total exposure. Total exposure (lux hours) = time (hours) x illumination (lux).

8.41 It is best to establish a maximum cumulative exposure value (in lux-hours per year). For example, an object normally exposed to 200 lux would be illuminated for approximately 2,250 hours during an average year. In this case the cumulative exposure is 450,000 lux-hours. If the level of illumination was doubled and the period of exposure halved, the cumulative exposure will remain the same.

Standards for moving musical instruments

9.1 A risk assessment should be carried out before any instrument is moved.

9.2 The handling and movement of instruments should be kept to an absolute minimum.

9.3 Trained personnel and suitable equipment must be available for the safe lifting and transport of instruments.

9.4 Contractors used for lifting and removal work should have proven experience in the field and must work closely with museum staff to ensure best practice in caring for the instrument.

9.5 Every move of an instrument should be carefully planned in advance. A sufficient number of staff with appropriate equipment should be available, and the route agreed and cleared in advance.

9.6 Instruments should be protected from physical shock and vibration, and from hostile environmental conditions.

9.7 Staff and volunteers should be trained in the handling and moving of instruments and should be aware of the potential risks to instruments and to themselves.

Guidelines and notes

9.8 Moving any object involves a risk of damage. Many musical instruments are very delicate; others are large, complex and heavy; and some instruments are all of these things.

- 9.9 The condition of instruments should be checked and recorded before and after the move.
- 9.10 Lifting and moving equipment should be provided to ensure that people do not lift or move any load that could cause injury. It is likely that limits for safe lifting to waist height will be introduced into Health and Safety legislation in the future.
- 9.11 Trolleys or crates, cushioned (for example with Plastazote polyethylene foam) should be provided for the moving of instruments.
- 9.12 Aisles and corridors should be kept clear at all times. Before an instrument is moved, the route should be prepared and a clear area made ready to receive it.
- 9.13 Wherever possible, self-opening doors and lifts should be used to make moving objects around the museum easier. Floor surfaces should be clear of obstacles (including matting) and should not be slippery. Lighting should be adequate and there should be sufficient space.
- 9.14 Large instruments should always be moved within their cases or on pallets.
- 9.15 It is essential to protect instruments against shock and vibration at all stages. Additional packaging may be needed to ensure soft, flexible materials immediately next to instruments, as a buffer against physical shock and vibration, within an outer rigid casing. Instruments should not be able to move about within their packaging. A variety of instruments are available to monitor shock and vibration received in transit.
- 9.16 All joints should be checked, and all loose components removed or secured. Accessible moving parts should be padded to avoid vibration, especially those on keyboard instruments.
- 9.17 All instruments should be adequately supported when lifted. Thus, stringed instruments should be supported at the base as well as at the neck, and heavy objects like pianos should never be lifted by the mouldings.
- 9.18 Never rely on an instrument's own castors. Instruments should never be moved on their castors, but always lifted, as their legs are often fragile and unstable.
- 9.19 Large instruments should have padding attached to their corners and edges before being moved, and accessible moving parts should be padded to avoid vibration.
- 9.20 Unless it is designed to be portable, a pipe organ should be moved only by an organ builder or other experienced and qualified person with appropriate historical knowledge. Injudicious handling can easily damage metal pipes.
- 9.21 There are specialist firms trained and equipped to transport particularly large, awkward, fragile, environmentally sensitive and valuable items. They will move objects within a building as well as from one building to another. Removal services using specially designed high-security vans are available; contact MLA's Security Adviser.

Mechanical handling

9.22 Moving large instruments, particularly keyboard instruments, will normally require some form of mechanical handling.

9.23 The use of pallets and pallet movers, both manual and motorised, is the key to the management of larger instruments. Instruments should be secured to their pallets by strapping devices, web netting or polythene wrapping sheets. Everyone who uses such equipment should receive appropriate training.

Beyond the premises

9.24 Fragile or important instruments should be transported by courier.

9.25 Boxes and crates in vehicles should be secured so that they will not move or slide about. Drivers should be made aware that they are carrying a fragile load and should drive accordingly.

9.26 There are specialist firms trained and equipped to transport particularly large, awkward, fragile, environmentally sensitive and valuable items. A removal service using specially designed high-security vans is available. Contact MLA's security adviser.

Section C Building and Management standards

10. Buildings and environment
11. Relative humidity and temperature
12. Physical protection from theft
13. Perimeter alarms
14. Invigilation
15. Key security
16. Protection from fire
17. Protection from flood
18. Disaster planning

Standards for buildings and environment

10.1 The planning phase of all museum activities such as new building work, refurbishment, exhibitions and other significant activities on museum premises must include assessments of their potential impact on the museum's environmental conditions, and potential risks to the collection.

10.2 Buildings used for the display, storage or examination of museum collections must be inspected regularly to ensure they continue to provide adequate physical protection against the weather, and are generally fit for the purpose.

10.3 Maintenance of the fabric of the building must be given a high priority and sufficient budget allocated for this. A badly maintained building will put a collection at risk from environmental damage.

10.4 Expert technical advice must be taken when planning modifications to the building or the introduction of measures to control the environment.

10.5 All collection and storage areas must be kept clean and tidy, and a regime for regular cleaning drawn up and implemented.

10.6 A programme for the regular maintenance of heating, ventilation and air-conditioning systems by suitably qualified engineers must be established and maintained. Maintenance should be linked to use and not to the time since the last service. Spare parts should be stocked on site as far as possible. These costs should be built into the budget.

10.7 Similarly, a programme for the regular maintenance of all environmental monitoring and control equipment must be established and maintained. Environmental records should be analysed regularly and summary reports presented to the museum's management team.

10.8 A programme for the regular calibration and maintenance of all environmental monitoring and local control equipment must be established.

10.9 All harmful, biologically-active agents must be eliminated from the collections, storage areas, buildings and plant.

10.10 A programme of regular monitoring of collections, buildings and plant for biologically-active agents must be instituted.

10.11 All incoming museum objects and records, and especially their associated packaging materials, must be inspected for the presence of biologically active agents and put into quarantine before being introduced to the main storage or display areas.

10.12 All materials used for the storage, display or transport of instruments must be approved by a conservator or qualified curator before being used in the construction, fitting out or dressing of a display case or storage module.

10.13 Instruments must not come into contact, or into close association, with materials that emit harmful substances (gases, fumes or other forms of pollutant).

10.14 All areas where instruments are stored or displayed must be kept in darkness when not in use by staff or visitors.

10.15 All maintenance, monitoring, cleaning, pest control or related work must be undertaken, or supervised, by fully trained and experienced personnel.

10.16 The museum must have a written Health and Safety Policy and must provide a safe workplace for employees so that their health is not put at risk. This will involve ensuring that plant and machinery are safe and that employees know how to operate them safely. Raw materials and equipment need to be moved and stored safely. Appropriate information, instruction, training and supervision must be provided to ensure safe working, e.g. training in relation to working safely and manual handling and compliance with relevant regulations, e.g. the Control of Substances Hazard to Health (COSHH) and the Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR).

Guidelines and notes

10.17 Managing the museum environment includes monitoring and control of relative humidity, temperature, light (including ultraviolet radiation) and pollution; pest management; and an assessment of the environmental effects of visitors (heat and moisture).

The building envelope

10.18 New buildings intended to house collections should be constructed so that they perform as good weather buffers by using materials and low-energy design features that help achieve as stable an internal environment as possible.

10.19 When considering the refurbishment or re-use of an old building, an assessment of both the building fabric and engineering services should be carried out by a suitably qualified technical expert prior to any decision on environmental control methods.

10.20 If a historic house is to be used as a museum, decisions relating to the provision of environmental control should aim to achieve a balance between the merit and sensitivity of the building fabric and the specific needs of the collections.

New buildings and or refurbishments

10.21 Prior to any major new building project, there should be a period of intensive monitoring outside the building and at the four compass points within the building. This will establish whether the building is worthy of consideration at all. If it is, then specific areas may be zoned for discrete activities according to their natural environmental stability.

10.22 New building work, redecoration and routine cleaning can introduce contaminants such as dust, solvent fumes or large quantities of moisture, which are harmful to collections. Action should be taken to remove dust and excess moisture before collections are re-housed following building work.

10.23 Where new building work such as concreting and plastering introduces moisture into a building, a period of time for drying out is required. The length of time will depend on the moisture content of the materials used and the thickness with which they have been applied. Surface drying can be speeded up using appropriately-sized industrial dehumidifiers before the introduction of collections into the space.

10.24 Building and finishing materials give off both particles (e.g. sawdust and concrete dust) and vapours (e.g. ammonia and water) especially during and soon after application. Collections should be protected from these effects; a new or newly decorated building should as far as possible not be used to house collections until tests show that emissions have ceased. This may take some months.

Environmental control within a building

10.25 Recommended levels of relative humidity and temperature within a building can be most easily attained if the building is well maintained and insulated. The structure should be watertight, with all possible sources of damp identified and remedied (e.g. failed or non-existent damp courses, leaking pipes, water tanks, faulty guttering, missing roof-tiles). Use of basement and attics should be avoided, as the environments of these areas are difficult to control.

10.26 Measures should be taken to stabilize the environment within a building or room. Insulation is one way of doing this, but professional technical advice needs to be taken. All apertures should be draught-proofed. Introducing blackout or double-glazing for windows may help to reduce temperature fluctuations. However, the cause of temperature instability should first be identified, otherwise these measures can make a poor situation worse.

10.27 Environmental monitoring should be undertaken all year round, and should be related to external climatic conditions. It should also take account of visitor numbers; a person can release approximately the equivalent amount of heat as a 60 watt light bulb and 100 ml of water per hour.

10.28 Zones within buildings can be created by establishing groups of rooms with similar environmental characteristics, by locally conditioning one room, or by the use of microclimates within display cases.

10.29 Air-conditioning can work successfully when the volume of tightly controlled air is restricted, such as in display cases or when a system is installed in new museum buildings. Air-conditioning should preferably be localized.

10.30 Air-conditioning is only one among many options available to control the museum environment and should not be used as 'quick fix'. A decision to install air-conditioning should be based on:

- the need for tight relative humidity and temperature control for the collection
- the need to control the heat and moisture effects of large numbers of visitors
- the affordability of the system, including the running and maintenance costs for the duration of its life

Dust & other air-borne pollutants

10.31 Dust causes damage directly and indirectly. It can cause surface damage, eg scratches; it encourages mould and corrosion by attracting and holding moisture; it can act as a catalyst for other chemical reactions such as fading and corrosion.

10.32 Dust can originate from both internal and external sources; good housekeeping and simple preventive measures can be used to reduce dust to a minimum. Windows should be close fitting and kept shut, and concrete floors covered or sealed. All instruments should be boxed, or their shelving protected by dust curtains (avoiding use of all materials that build up static charge and so attract dust), and there should be large loop-piled doormats at the doors. The use of vacuum cleaners with ultra-fine filters is recommended; these should conform to BS 5412, Section 2:2. Supplement 1 (1986), Specification for type H industrial vacuum cleaners for dusts hazardous to health.

Note

An alternative could be to use a domestic vacuum cleaner fitted with HEPA (High Efficiency Particulate Arrestant) type of filter(s) that can trap a large amount of very small particles that other vacuum cleaners would simply re-circulate back into the atmosphere. True or absolute HEPA filters must pass a test to be considered HEPA worthy. True HEPA filters will have a serial number assigned to them if they are able to trap at least 99.97 percent of particles of 0.3 microns. These test results will be printed on the filter. HEPA type or HEPA like filters may be made in similar ways to true HEPA filters but do not meet the same standards as true or absolute HEPA filters. They often capture only 85 to 90 percent of particles and that percent can fall even lower for particles of 1 micron and below. HEPA is a US (ANSI) specification.

10.33 Dehumidifiers that work using a heat pump can be a serious source of pollution due to airborne soot pumped out into the atmosphere.

10.34 A conservator should advise on appropriate cleaning materials, and materials for use in the display and storage of instruments.

10.35 Many types of material (e.g. manufactured boards, natural fibres such as wool-felt and silk, fire retardant coatings, cleaning compounds, recently applied paint, adhesives, and some woods, especially oak) emit substances harmful to museum objects. Many woods give off acetic acid in small quantities, which can cause damage in an enclosed space.

10.36 Concentrations of reactive gases like sulphur dioxide, ozone and nitrogen oxide can rise to high levels in city air, as can levels of smoke and building dust. These gases cause fading and degradation of organic materials, and deterioration of inorganic materials, while the particles cause irremovable staining and soiling. These pollutants can be reduced in the museum by sealing windows and doors and applying a positive pressure to sensitive areas, and by installing air-conditioning which incorporates air-scrubbers. Well sealed storage containers contribute significantly to protection from external pollutants. Some photocopiers are a source of ozone.

Pests

10.37 In addition to regular cleaning, Integrated Pest Management (IPM) should be introduced across the Museum to avoid pest problems. The emphasis should be on constant monitoring, and pesticides should be targeted on a specific problems rather than being generally applied. The museum should use 'pest-unfriendly' storage materials, and procedures agreed for material entering the Museum, including quarantining. A suitable Control of Substances Hazardous to Health (COSHH) Regulations assessment must be made for any treatment involving pesticides.

10.38 The storage and use of pesticides is controlled under the Control of Pesticides Regulations, 1986 (COPR) or the Plant Protection Products Regulations 1995 (PPPR), and the Biocidal Products Directive (98/8/EC). Further information available at www.hse.gov.uk.

Exhibition outdoors

10.39 Museum objects should only be taken or displayed outside in very exceptional circumstances. Only in the case of soundscapes, sound machines and aeolian instruments that were created to be used outside, should permanent exhibition outdoors be considered. Fairground organs and similar instruments may, however, occasionally be demonstrated outside if they have been identified as usable in these circumstances. However, they should only be left outside overnight if they are adequately protected and if this is considered less damaging than moving them between outdoors and indoors.

Standards for relative humidity and temperature

11.1 Different materials should be kept in appropriate relative humidity and temperature as detailed on MLA website (add ref)

11.2 Sudden or extreme fluctuations in relative humidity and temperature must be avoided.

11.3 Temperature and relative humidity must be regularly monitored in all storage and display areas, and the records assessed regularly with reference to the condition needs of the collections. At least every year a conservator, or other suitably qualified and experienced person, must collate and assess the records and a report must be presented to senior management and any recommendations acted on.

11.4 Before environmental control equipment (e.g. humidifiers or dehumidifiers) is acquired or installed, the environment of the area to be controlled should be monitored

and the resulting records collated and assessed by a conservator or other suitably qualified and experienced person (preferably an HVAC engineer), in the light of the condition of the collection.

11.5 Instruments must be isolated from sources of direct heat, including the heat-producing components of lighting installations. All sensitive materials must be protected from excessive exposure to all sources of light.

11.6 A programme for the regular maintenance of all environmental monitoring and control equipment is essential. Maintenance should be linked to use and not to the time since the last service. These costs should be built in to the museum's budget.

11.7 All maintenance work, monitoring and cleaning, must be undertaken, or supervised, by fully trained and experienced staff.

Guidelines and notes

Relative humidity and temperature

11.8 The levels of humidity and temperature recommended in publications – even in these Standards - should be used with caution and expert advice should be sought. For most materials, it is important to maintain equilibrium between the moisture content of the object and its environment, so great care should be exercised in moving a specimen from an environment to which it is in equilibrium, to a supposedly 'better' one.

11.9 In order to achieve the best environmental conditions for all materials, the organisation of storage and display areas needs to be material-specific.

11.10 As temperature falls, relative humidity rises; as temperature rises relative humidity falls. This is true if no moisture comes in from outside or is generated from within, and there is no artificial control of the climate within the space.

11.11 The higher the temperature, the faster any chemical and biological change will progress. For this reason, the temperature should be kept as low as possible (but above freezing) in all unoccupied areas, though this should not be such as to cause the relative humidity to rise above the recommended levels. It should be noted that legislation governs the minimum temperature for areas in which staff should work.

11.12 Controlling humidity by installing dehumidifiers and/or humidifiers in bulk storage areas can be more efficient and cost-effective than installing heating plant. This is because as long as relative humidity is held at the required levels, the temperature can be allowed to fluctuate.

11.13 Condensation can occur on a cold surface when it is exposed to warm air. This is because a volume of warm air is capable of holding more moisture than the same volume of air at a lower temperature. The sudden drop in temperature around a cold object will cause moisture to condense out of the cooled air on to the surface of the object.

11.14 Sudden extremes of temperature can cause composite materials or materials with a low thermal conductivity to crack.

11.15 Where it is not possible to provide appropriate conditions in individual rooms or zones, microclimates should be created. For example, in a sealed showcase or a polyethylene box can be maintained at a determined level of relative humidity using 'conditioned' buffering material or saturated salt solutions.

11.16 Measuring and recording the environment by regular spot checks using an aspirated hygrometer or thermal hygrometer is the minimum acceptable level of monitoring. Ideally, monitoring should be by remote environmental sensors connected to a computerised data logging system or by continuous recording thermohygrographs (7 day charts). Conditions on the outside of the building should also be monitored. A schedule of regular cleaning and calibration of all monitoring equipment should be instituted. Staff responsible for this work should be suitably trained.

11.17 Dataloggers should be set to record at discrete intervals of between 30 and 60 minutes. Any more frequent and a mass of data will be recorded and will need to be analysed. These ranges are acceptable for meeting Government Indemnity Scheme requirements depending on the material. Recording at 30-minute intervals would be appropriate for materials that are hygroscopic and lack bulk e.g. paper, paintings, whereas one hour intervals would be appropriate for materials that are inorganic ie metallic or hygroscopic and bulky eg wood.

11.18 Microclimates should also be monitored. A relative humidity indicator strip should be positioned so that it can be checked without opening the case or container.

11.19 Many musical instruments are very susceptible to damage from unsuitable climatic conditions, and the situation may be complicated if they are made of a variety of materials. Each material - wood, metal, hair, leather and so on - will respond differently to a specific set of environmental conditions.

11.20 Both natural and electric light sources produce heat, which can damage instruments: for example metal objects will expand as their temperature increases, which may lead to permanent distortion, or displacement of their coatings or inlays. Sharp or repeated fluctuations of temperature are particularly damaging and are to be avoided.

11.21 All instruments should be positioned away from sources of heat, and excess heat should be ventilated away from instruments. Newer lighting equipment, especially low-voltage types, produce less heat, though care must be taken when positioning transformers which should be outside display cases. There should be provision for dissipating excess heat by ventilation: for example, a display case with integral light boxes should allow for heat to be vented from above the light box.

Standards for physical protection from theft

12.1 The structure of the building or area in which collections are held must be capable of withstanding a determined attack by thieves or vandals. A well-designed and well-maintained perimeter fence or wall provides the first line of defence, especially if monitored by alarms and CCTV. Security lighting triggered by PIR detectors provides a cost-effective deterrent.

12.2 Windows, doors, ventilation shafts and ducts should be designed, constructed and secured so that an intruder is deterred from trying to enter, or is delayed long enough to allow an alarm to trigger a response before intruder can enter, steal and escape.

12.3 Display cases must not be regarded as the primary protection against theft of display material when the building is unoccupied. Their construction must, nevertheless, provide a level of security appropriate to the risk. Showcases must have good-quality locks, well-fitting doors and an appropriate quality of glass. The use of small security alarms within showcases can reinforce invigilation.

12.4 All objects on open display are at risk and an internal CCTV system should be considered if warding staff numbers too few for the risk.

12.5 All storage cabinets and other furniture must be kept locked when not in use and held in a secure area.

12.6 There must be an expert assessment of the security arrangements for the museum and its collections at least every 5 years.

Guidelines and notes

12.7 The structure of the museum building should be such that penetration through the walls and roof is both difficult and time consuming. The material used should be in at least 9" (230mm) cement mortar/clay brickwork or material of the equivalent penetration resistance. Even relatively weak buildings, for example those of wooden construction, can be improved to meet this requirement.

12.8 The number of windows should be reduced to the essential minimum. Windows not required for use should be bricked up using clay bricks or equivalent and cement mortar fully keyed into the existing walling, or by other methods agreed with the National Security Adviser. Windows in use should be protected by means agreed with the National Security Adviser.

12.9 Doors to the outside should be reduced to the minimum, leaving only those required for entry or as Emergency Exits. Unused doors must be bricked up in the same way as windows, or blocked by other methods agreed with the National Security Adviser. Remaining doors should be of at least 2" (50mm) thick solid construction, and should be fitted with security standard mortice deadlocks conforming to BS 3621. European standards provide for a range of security levels including barrel locks that allow key suiting, which is strongly recommended.

12.10 If doors of lesser quality are to be retained, they should be protected by internal roller shutters or folding metal gates. Emergency exit doors should be fitted with modern quick-release door furniture and must be capable of being deadlocked when the building is unoccupied. Exterior doors should whenever possible have no external furniture.

12.11 Pitched roofs of slate or tile should be fitted over close-boarded timber. The National Security Adviser can advise on the use of other materials. Unauthorized access to the roof should be limited by physical barriers such as fencing, anti-climb paint or anti-vandal barriers.

12.12 The risk to collections will vary enormously, depending on the value of the instruments, type of visitor, neighbourhood, and so on. The risk should be assessed with MLA's Security Adviser and the local Crime Prevention officer and appropriate measures agreed and implemented. Display of replicas may sometimes be the best option.

12.13 Modification of historic buildings may require Listed Building or other consent. Where the museum shares a building with another user it is important to ensure that strict security arrangements are agreed and adhered to by all parties. In shared buildings, the internal perimeter of the museum premises should be treated and strengthened in the same way as the external perimeter.

12.14 Most buildings, if protected in accordance with MLA advice, can be left unattended. Even when a night guard is employed, current practice is to monitor the building electronically and with closed-circuit television, in addition to regular patrol. Museums with high value property that do not have CCTV could be at increased risk. CCTV allows invigilators to be more effective, acts as a deterrent, makes recordings to assist with post-incident investigation, assists with entry control arrangements, provides general information to assist in the management of the premises, and where the premises are guarded out of hours to assist with site monitoring. See MLA's advice on security <http://www.mla.gov.uk/information/advice/00security.asp>

Standards for perimeter alarms

13.1 All openings in the building fabric, such as doors, windows, roof lights, or ventilator shafts, must be fitted with intruder detectors. An intruder detection alarm system should be fitted by a company approved by the National Council for Security Systems (NACOSS), and should qualify for that Council's certificate to BS 4737: Intruder Alarm Systems in Buildings.

Guidelines and notes

13.2 The system should be as simple as possible to avoid an unacceptable false alarm rate and should depend upon suitable sensors fitted to doors and other openings. Dual technology detectors that rely on movement and/or body heat are more reliable and less prone to false alarms.

13.3 The signalling of an alarm condition should be by means of a monitored line to an internal or alarm company's central station. This will give an alarm if the line is cut.

Standards for invigilation

14.1 The level of invigilation of the displays must be appropriate to the risk.

14.2 The backgrounds of all researchers with access to collections must be checked and recorded. Researchers must be adequately supervised.

14.3 Nobody must be allowed into museum stores unless accompanied by an authorized member of staff.

14.4 As far as possible, a record photograph should be kept of every object in the collection.

14.5 Written procedures agreeing levels of access should be in place for staff and researchers.

Guidelines and notes

14.6 The risk to items on display should be assessed and an appropriate level of invigilation be provided. This level must never be reduced. If sufficient invigilators are not available, the relevant gallery or even the whole museum should be closed. Special care should be taken at unusual times, for example while an exhibition is being installed or during evening events.

14.7 Researchers have, unfortunately, been responsible for serious thefts from museums. Everyone using the collections should be made aware that access is subject to guidelines, and even the most senior researchers should be obliged to follow them

14.8 Any theft or security incident should be reported immediately to the Police and to the 'Crimefile' information exchange maintained by the Regional Agencies.

14.9 Particular attention should be given to contractors who may need access to stores, roofs, and other areas that are normally accessible only to staff. Procedures to follow are outlined in MLA's Security advice - <http://www.mla.gov.uk/information/advice/00security.asp>

14.10 Researchers requiring access to collections must be prepared to provide references or other proof of identity and serious interest in the collections. If they request to handle instruments, they should also provide evidence of their experience and skill.

14.11 The written procedures agreeing levels of access should be given to researchers in advance (see also 4:21).

Standards for key security

15.1 A strict policy regarding the possession of keys must be drawn up and enforced.

Guidelines and notes

15.2 There should never be more keys than is strictly necessary and the number of people in possession of keys should be kept to the barest minimum. All keys, other than the external door keys held by key holders and keys to safes, should remain within the building in a secure key cabinet or safe, and should be identified by a coding system. An issue system against signature should be used as a security measure.

15.3 An inventory of keys issued for long-term use should be made and updated constantly. When temporary keys are issued, they should be logged on a separate register and signed in and out on a daily basis.

Standards for protection from fire

16.1 The museum building must be designed or adapted to minimise the risk of fire and to prevent its spread.

16.2 Areas of the museum that house collections must be rigorously insulated to a high standard, preferably to one hour from fire spread in areas of risk, e.g. workshops, laboratories, kitchens, boilers, chemical stores.

16.3 The degree of risk from 'risk areas' must be reduced as much as possible, e.g. by using an external chemical store. If chemicals are kept within the building, it must be in accordance with the advice of the local Fire Officer. A suitable COSHH (Control of Substances Hazardous to Health Regulations) assessment must be made and a copy kept in a convenient place for passing to emergency services on their arrival at an incident.

16.4 All electrical wiring and equipment must be installed in accordance with the appropriate British Standard, the Institute of Electrical Engineers' Regulations, and the Electricity at Work Regulations, and must be regularly maintained and checked as required by those regulations. A register of each piece of portable equipment must be kept and the equipment checked annually by a qualified person.

16.5 Gas, oil and mechanical equipment must be installed in accordance with appropriate British Standard and statutory instructions, and must be regularly checked and maintained. A Register of each piece of equipment should be established, which should contain maintenance records and inspection certificates. A detailed plan of all installations should be kept in a convenient place, known to all staff, so that it can be made available to the emergency services on their arrival at an incident.

16.6 The advice of the Building Control Officer and Fire Officer must be sought on the selection of all materials used in displays and storage areas. Normally all such materials should be fire-retardant, class 0 or A.

16.7 Contracts for work on the premises, at least those for hot-working, work in stores and work on dangerous equipment, should be on a 'Permit to Work' basis, and no work involving heat sources such as blow torches or arc welding machines should be permitted. If such heat sources have to be used the FPA's Joint Code of Practice for Fires on Construction Sites (FSB9) should be followed.

16.8 All parts of the building must be covered by an automatic fire-detection and alarm system, installed and maintained in accordance with BS 5839: Fire Detection and Alarm Systems in Buildings.

16.9 The premises must be equipped with fire-fighting equipment as recommended by the Fire Officer and complying with BS 5423: Portable Fire Extinguishers, and BS 5306: Fire Extinguishing Installations and Equipment on Premises.

16.10 Fire resistant cabinets should be provided to house the primary records and museum documentation. Copies of records and back up computer files should be kept in a different building.

16.11 All staff and volunteers must regularly attend training in fire prevention and response. The level and standard of this training must be at least consistent with Part 1 (18) Fire Precautions Act 1971.

16.12 Smoking must not be permitted on the premises.

16.13 Depending on the use of a building and the number of people working in it, a fire certificate may be needed, as required by the Fire Precautions Act 1971.

16.14 Museums must implement emergency or disaster plan(s).

16.15 The museum must receive an annual visit from the local Fire Prevention Officer for familiarisation of the building(s) as part of the emergency and disaster procedures.

16.16 The Fire Prevention Officer must be invited, quite apart from their statutory responsibilities, to inspect the premises at least once a year, and be made aware of the particular requirements of museums. Their recommendations must be reported to the museum's Board of Management. Their approval must be sought when any building alterations are to be carried out.

Guidelines and notes

16.17 A survey will be needed to decide the type, number and location of fire-detection sensors appropriate to the building. A wider survey can be undertaken to identify specific risks and precautions required, to provide a fire precautions manual containing checklists and disaster plans, and to set out a reporting procedure. Specialist companies and many major security firms can give such advice.

16.18 Sprinkler systems are a highly effective method of controlling outbreaks of fire. Modern systems are designed to operate only in the locality of the heat source and will close off the water supply once the heat source has been neutralised. They should be able to be turned off from outside the building. It is important to ensure that the water delivered by sprinkler systems is perfectly clean; new sprinklers can contain a significant amount of machine oil, which must be flushed out. When sprinklers are installed or tested the collections should be removed to temporary storage.

16.19 HMSO's guidance entitled Fire Safety: An Employer's Guide <http://www.archive.official-documents.co.uk/document/fire/contents.htm> assists employers in meeting their fire safety responsibilities in the workplace with user-friendly advice on the Fire Regulations. Although primarily directed towards employers, the guidance is helpful to everyone in the workplace and others who need to know about fire precautions. It includes details of building regulations and other legislation.

16.20 Many museums are in historic buildings, and adaptation to meet fire prevention and security requirements often cause problems. The hard-copy publication *Heritage Under Fire: a guide to the protection of historic buildings*, ed. Stewart Kidd for the Fire Protection Association (2nd edition 1995, ISBN 0902167901). Is a useful source of advice. Regional Agencies can also give advice - directly or through consultants - on possible solutions.

16.21 Public events such as concerts or exhibition openings pose a particular fire hazard, as does film location work. Careful thought should be given to fire prevention when planning events. Emergency procedures should be planned and practised.

16.22 The Government, through the Office of the Deputy Prime Minister, is currently reviewing all fire safety regulations with the view to repeal or amend over 100 separate pieces of legislation. Fire certificates will disappear. Details can be found on the www.odpm.gov.uk and much useful information on building and fire legislation on www.fire.org

16.23 Remember that if fire occurs, the media will want to know what has happened, with details of damage to the collections. The museum should be prepared to allow time for journalists and photographers.

16.24 The biggest single reform of fire safety legislation in over 30 years has now been agreed by Parliament and the new law comes into force in autumn 2006. This will simplify the law while placing a greater focus on prevention and consolidates existing fire legislation. At present fire safety laws are scattered across more than 70 pieces of legislation. Responsibility for fire safety will be placed on the employer or 'responsible person' for that building or premises. He or she will be required to assess the risks of fire and take steps to reduce or remove them.

Standards for protection from flood

17.1 The potential risks and possible sources of flooding must be assessed for each display or storage area. This information must be used when planning new displays and storage areas, and to update disaster plans.

17.2 As far as possible no pipework or tanks must be permitted in new buildings in areas where collections are kept. Every effort should be made to exclude pipework from such areas in old buildings. Adequate drainage should be provided in buildings where there is a possibility of flooding and a sump should be constructed for pumping out water.

17.3 Every object which can be raised (if necessary on a pallet, with lifting gear), must be placed at least six inches (125mm) above the floor. Objects should be kept away from the walls.

17.4 Appropriate precautions should be taken in museums liable to flooding. Museums should work towards the permanent removal of the threat, or relocation of the collections. Storage areas should not be below ground level and the disaster plan must include removal of the collections in case of flood.

Guidelines and notes

17.5 Most musical instruments are particularly vulnerable to damage. The assumption that 'if a flood can occur, one day it will' should guide arrangements in the museum.

17.6 Compliance with relevant building regulations and recommendations, especially in old buildings, may render the complete exclusion of pipework difficult. Every effort should be made, in discussion with the appropriate technical consultant, to find a satisfactory compromise solution. In areas where objects can be raised off the floor, one solution may be to run the pipe work at ground level rather than ceiling level. Automatic cut-off valves should be installed, and leak detectors are desirable. If pipe work is at a high level, then the tops of adjacent shelves and showcases should be protected with polythene sheeting. Waterproof boxes and cabinets should be used whenever possible. The danger of leaks from humidifiers and dehumidifiers should be considered.

17.7 All pipe work and stop-cocks should be labelled in accordance with BS 1710: Identification of pipelines and services, should be noted on the building plan in the museum's Disaster Plan. Pipework must be covered with insulation or, if not, inspected frequently during frosty weather.

17.8 Adequate drainage to cope with flooding should be provided; drains should have non-return traps.

17.9 All taps to sinks should be of the spring-loaded automatic turn-off type.

17.10 The possibility of installing flood detection alarms should be considered especially in storage areas with pipework and in underground situations.

17.11 The museum's Disaster Box should contain equipment for dealing with floods, including materials ('absorbent pillows' or 'super slurper') which absorb moisture in large quantities.

17.12 The danger of water-damage as a result of fire should be considered in disaster plans and should be discussed regularly with the Fire Brigade.

17.13 All staff and volunteers should receive regular training in flood prevention and response.

Standards for disaster planning

18.1 The museum must draw up a Risk Assessment and a Disaster Plan appropriate to the museum, both in order to minimise risk, and for the protection and rescue of the collections in the event of fire, flood or other catastrophe.

18.2 The plan should include a range of options on how the museum should deal with a disaster.

18.3 All museum staff and volunteers must receive regular training, preferably on an annual basis, in how to respond to disasters. Building evacuation for the staff and public must be practiced at least twice a year.

Guidelines and notes

18.4 It is essential that the Disaster Plan be drawn up in close co-operation with the public emergency services, especially the Fire Service, and be reviewed regularly with them.

18.5 The Disaster Plan is a written document that sets out procedures to be followed in an emergency. Its general contents will be known to all staff and volunteers through prior discussion and through regular training sessions and emergency exercises. Its details will provide an aide memoir, list of resources and telephone numbers for those finding themselves in control. Once written, it requires continual revision to ensure that it remains relevant and current.

18.6 The plan should include:

- identification of the most important museum objects, and provision for their priority rescue;
- responsibilities of staff, method of raising alarm and communication to others;
- emergency telephone numbers, including home numbers of staff;
- a regularly updated confidential plan of the building(s) showing services, hazardous stores, etc. A separate copy of this should be available to the fire brigade on arrival.
- priorities in mitigating damage to the collection;
- sources of relevant expertise, including conservators and staff from nearby museums, archives, etc as agreed beforehand;
- list and locations of material and equipment, (every museum should have a 'disasters box' containing mops, buckets, cloths, overalls, etc);
- list of suppliers and services, (e.g. freeze-drying, haulage contractors);
- security measures for the collections if premises damaged, eg pre-arranged safe storage;
- first aid measures for damaged collections, by type of material, drawn up in consultation with conservators;
- details of a range of options of how the museum will operate following a disaster;
- an agreed budget including petty cash and/or chequebook, with a hierarchy of authority to spend money in an emergency. The hierarchy should extend as far

as possible in order that someone present at a disaster is authorised to spend money.

- security measures for the buildings, if damaged (eg boarding-up contractors);

18.7 A complete record of the collection and its disposition within the store and on display should be available some distance from the collection itself, and a duplicate should be held in another building.

18.8 Important instruments should be clearly labelled and housed so that they can easily be rescued, but without compromising their security. Staff should be trained in the removal of these items in the event of a disaster.

18.9 Books and papers are routinely saved after disasters by firms which freeze the wet items and then freeze-dry them to remove the ice.

18.10 In every museum, the disaster response plan should be only part of a wider policy for the protection and rescue of people and of the collections.

18.11 Staff should be given regular training in responding to disasters and should regularly practice their response. External conservators who might be brought in to help in the event of a disaster should be briefed regularly.

18.12 Ideally the museum should be able to call in support from a local/regional disaster squad. If one is not available consideration should be given into setting on up as a partnership with local museums.

Section D Access and Education standards

- 19. Access and Education
- 20. Loans
- 21. Research

Standards for access and education

19.1 Museums exist for the public benefit and it should be the aim of every museum to allow as much access as possible to its collections and to their associated information. The museum must publish information about itself and the collections.

19.2 The museum must have an Access Policy in which all forms of access are considered, intellectual as well as physical, digital as well as paper. The access policy should define the standards it seeks to provide in relation to its purpose and the status of its collections.

19.3 The museum must provide and maintain services and facilities that encourage, permit and support access and use by all sections of the public. It must have appropriate internal and external signing and must post arrangements for visitors and for customer care facilities.

19.4 Museums must provide opportunities to learners and an environment conducive to learning. It must also give details of services it provides to communicate knowledge and information related to objects in its care. All relevant legislation must be complied with including the Disability Discrimination Act 2004.

19.5 The museums must undertake consultation with users in order to establish that opening arrangements, access to collections and available services are appropriate to users/potential users. The process must take place at regular intervals and should use appropriate methods such as visitor books, comments cards, complaints mechanisms, which should be part of customer care practice.

19.6 Museums with collections of significance for researchers at post-graduate level should adopt standards for access which include publishing:

- a description of the collection
- a response time for confirming the presence or absence of objects and archive material (recommended maximum 15 working days)
- a period within which an appointment to study the material can be offered (recommended maximum 30 working days);

19.7 A study area should be provided with appropriate facilities to examine instruments and related records.

19.8 The museum has a duty to safeguard the collections and records, which may conflict with ease of access. The access policy should properly balance the requirements of access and security.

19.9 Museums should make it a priority to have some form of published catalogue which enables users to know the extent and nature of their collections.

19.10 The museum should ensure that all its collections have collection level descriptions and - if practically possible – the collections should be listed on the Cornucopia website www.cornucopia.org.uk

19.11 The museum must give details of any restrictions on opening times or access arrangements to collections, especially by appointment only, if they exist, why they apply, and alternative arrangements which the museum may have developed to enable the public to benefit from the collections.

Guidelines and notes

19.12 Learning and access to museums is fundamental for inspiration and enjoyment. People can only engage with or use collections and services when they have physical, sensory, intellectual, financial and cultural access to them. This broad understanding of the term access also covers cultural diversity, disability and social inclusion issues.

19.13 The definition of a museum emphasizes the fundamental presumption that collections are held by the museum for the public benefit. There should be a presumption against storing material without the active development of policies and facilities to promote its use and access to it.

19.14 There are many forms of access which may be appropriate to the nature of the collection, e.g. the permanent or temporary display of instruments, the educational use of a Teaching Collection, the publication of information about the collection, and the provision of services to researchers and co-operation with other museums. All forms of appropriate access should be considered and promoted. Such facilities may include interactive computer terminals, study areas within galleries or adjacent to stores, research libraries, on-line database and a website. See 'Voices for the Silenced: Guidelines for Interpreting Musical Instruments in Museum Collections' by Margaret Birley, Heidrun Eichler, and Arnold Myers, with the CIMCIM Working Group for Education and Exhibitions (Co-ordinator Jos Gansemans) <http://www.cimcim.icom.museum/iwte.html>.

19.15 People with severe visual impairment can only enjoy and experience musical instruments by touching them. Museums should try, wherever possible, to make special arrangements to allow them to do so, but remembering that not all material is safe to handle.

19.16 One form of access is the loan of material from the collection, in which case the particular rules and guidelines for the loaning of objects should be observed. If a museum with collections of significant research interest has a policy to minimise or forbid loans, this should be balanced by providing better study facilities.

19.17 All museums should observe the guidelines for customer care set out in the Museums & Galleries Commission's Quality of Service in Museums and Galleries.

19.18 Some items or collections may be on display for more limited periods than other museum material because of their weight and size. There is therefore a particular need to ensure that visitors are able to get access to material not on display. The museum needs to have an Access Policy that sets out how this is to be achieved; it should set out response times, and how the arrangements are to be advertised.

19.19 The museum should accept that it will not always be able to give access to every object all the time. In such situations it is essential that the museum explain to an enquirer why access is not possible and offer an alternative source of information. This might be an article on the object, photographs, drawings or a date when access can be given. The museum's Access Policy should refer to this.

19.20 All visitors coming to study objects in reserve collections should be briefed on the museum's procedures by staff, and the reasons for any restrictions explained to them. These procedures will include:

- supervision
- handling
- use of note-taking equipment
- photography

19.21 Accessibility should always be considered when designing storage systems and packing.

19.22 A good catalogue saves wear and tear on objects by reducing browsing through shelves or boxes, whether by staff or visitors. Image databases can provide appropriate images and information for the general public, researchers and curatorial purposes. Even a simple hand-list to an exhibition or part of the collection can be very useful in providing basic information for staff and visitors.

19.23 The appropriate types of access to each object will be determined by its status within the museum, and by the needs of users. Thus, a casual visitor may be content to see a viol in a 17th century room setting, but a specialist will need to get much closer, and so will people with poor eyesight. The aim should be to provide appropriate access for all the museum's users, and to ensure that they have the same access to musical instruments as to other parts of the museum's collections.

19.24 A particularly important form of access to musical instruments is provided by the recording of instruments being played (but see Annex B.).

19.25 Another traditional form of access is the provision of drawings to enable working copies of the instruments to be made. Such drawings need to be detailed and accurate enough to enable a maker to select appropriate materials and make an instrument with characteristics similar to the original. Ideally, a good drawing should include expert recommendations on the original state if the original has been altered, on pitch, and on parts that have disappeared, such as strings or hammer coverings. Such recommendations will often need to be based on other instruments.

Reproductions & replicas

19.26 An important aspect of access to instruments is the use of reproductions and replicas.

19.27 Replica items should be as accurate as possible and should always be labelled as such, especially when used in displays.

19.28 Museums are increasingly looking for ways to maximize the commercial exploitation of their collections. This is a field in which the greatest care needs to be exercised; the copyright and other legal aspects must be correct (specialist legal advice is essential), and the physical and intellectual integrity of museum instruments must be protected at all times.

Digital access

19.29 The museum web site should give clear information about access to items or collections referred to, or illustrated, including times of opening and other access details if the items are on public display. Details of how to make an appointment to access items not on display, and how to arrange a loan, should be given along with any access restrictions.

19.30 The web site should always give the contact details, including e-mail and postal addresses, from which further information about any aspect e.g. item, collection or display, can be obtained.

19.31 The web site should comply with the Data Protection Act and great care should be taken not to divulge confidential information, especially personal details about collectors or donors, or financial details relating to acquisitions, or information about storage locations, which could compromise security.

19.32 The Museum should ensure that all information on the web site has been checked for accuracy before being placed in the public domain.

19.33 Online information and catalogues should meet the standards set by the Worldwide Web Consortium (W3C).

- sites should use logical instead of physical tags
- focus on an accessible structure rather than flashy visual effects which may not be accessible by text browsers and speech synthesisers
- keep tables simple and test using text browser to ensure it makes sense when 'linearised'
- avoid using frames if possible; if used, ensure there is a 'no frames' alternative
- provide text equivalents for all non-text elements such as images and buttons
- use contrasting colours for text
- use cascading style sheets
- make designs flexible so font size, colour can be adjusted by users.
- have webpages validated for disability access, using 'webxact' free online service that lets you test single pages of web content for quality, accessibility, and privacy issues. <http://webxact.watchfire.com/> (active from 1 May 2005, replacing the previous 'Bobby' website).

Standards for loans

20.1 Subject to the guidelines below, instruments and/or associated objects in a museum's collections should normally be available for loan. Objects loaned should be appropriate to the purpose of the loan; important material must not be loaned for trivial purposes. An institution must decline or modify loan requests that make unrealistic demands on the use of the collections, or where the loan could lead to harm or loss.

20.2 Every museum must have a written loans policy and standard conditions; these conditions may vary for different types of material.

20.3 A risk assessment must be undertaken before agreement to loan is made.

20.4 Loans must be packed carefully and securely on both outward and return journeys, and should be documented to the SPECTRUM standard for Loan records procedures 2 and 17.

20.5 For musical instruments that could be played, there should be a written policy and procedure for lending, and standard conditions that borrowers must accept in writing before the loan is made. If playing is to be permitted, additional standard conditions must be detailed, agreed and signed by the borrower before a loan is made.

Guidelines and notes

20.6 Loans inevitably put objects at extra risk, and a responsible museum will approach the drafting of a loans policy with great care, and will ensure that the policy is rigorously observed.

20.7 A risk assessment must be made of any item in the collection before a decision to loan is taken.

20.8 Museums that make many loans should keep a register of approved borrowers, both institutions and individuals, who may be required to provide references. When loaning to employees or affiliates of an institution, loan conditions should specify that the responsibility rests jointly with the individual and the institution, represented by a named individual. All loans for research students should be to the supervisor and not to the student.

20.9 Lending musical instruments is particularly dangerous, both because of the fragility of many instruments, and because of the danger that they may be played without permission. Thus, while a museum may wish to lend instruments from its collection to another museum for exhibition, a responsible museum will approach the drafting of a loans policy and procedure with great care, and will ensure that the agreement is rigorously observed.

20.10 Typically, material that is unique:

- should be loaned to private addresses only in exceptional circumstances
- should not be loaned for more than six months

20.11 Material that is not unique:

- may be loaned for longer periods, with a maximum recommended initial period of one year, renewable on written request
- should not normally comprise the whole of an institution's holding of a given type of instrument in a single loan
- should normally only be sent to recognised institutions
- if sent abroad, should be the responsibility of a named individual at the borrowing institution

20.12 The written agreement between the lender and borrower should be signed and retained by both museum and borrower. It should normally require the borrower:

- to arrange insurance as required
- to pay for a courier
- to acknowledge receipt of the loan immediately
- to accept that all images made from the objects remain the property of the loaning museum
- not to transfer instruments or associated material to a third party, or to remove them to a different institution, without prior written permission
- to request any extension of the loan period by a specified date before the end of the current loan, and to agree to return the loan at any time requested by the loaning museum
- to return loans by an agreed method
- to indemnify the loaning museum against any claims for injury or damage caused by an object or its packing. The loaning museum should warn the borrower of any known hazard associated with the object
- to undertake condition reporting as requested
- to monitor, record, and if necessary act on environmental conditions, to safeguard continuity
- to agree on where and how the object is to be kept and displayed
- to permit regular inspection by curator and conservator
- to inform the loaning museum immediately of any loss of, or damage to the instrument, and not to undertake any repair

- if repair or conservation is appropriate, to agree to pay for work by the curator or conservator approved by, or selected by, the museum

20.13 If the results of a study of a borrowed instrument or any other object are to be published:

- to obtain any catalogue/accession number from the loaning museum and not to assign their own number or letters
- to credit the loaning museum in a specified way
- to cite the accession number of any instruments referred to in publications
- to provide the loaning museum with a specified quantity of the resulting publication
- not to take or publish photographs without the permission of the loaning museum

20.14 An exit record should be completed for every loan out, either in addition to or incorporated in the loan agreement.

20.15 A permanent record of every loan should be kept, for example by keeping the exit record and loan agreement in the object's object file

20.16 A condition report should be prepared on each instrument both before it is loaned and immediately after it is returned.

20.17 A condition report on the environment that the object is going to should be prepared and the likely conditions to be encountered during transit if going abroad. A couriered instrument or group of objects should be carried as hand luggage in robust casing or container. Large instruments should be accommodated in a specially constructed and environmentally sound containers with monitoring sensors.

20.18 The UK Registrars Group provides a checklist Standards Facilities Report with supplements covering security and display cases, and Guidelines for Couriers - <http://ukrg.org/Index.php>

20.19 Standard loan conditions for playing instruments should also normally include:

- stipulations on who may play the instrument, and how often, for how long, etc (see Annexes B.1 & 2)
- a requirement to observe the instrument's care plan, a copy of which should accompany the loan
- any other special requirements of the curator or conservator
- general requirements for display and storage when the instrument is not being played

- agreements on routine care and limits on necessary repairs
- stipulations on tuners, tuning and pitch of the instrument
- requirement to maintain the playing log, a copy of which should accompany the loan
- standards for documenting the playing and care of the instrument
- any special insurance requirements
- arrangements regarding sound recordings, and any copyright arrangements
- any financial arrangements for the loan, including hire/playing charges, cost of maintenance and repairs, percentage of earnings (especially, for instance, on film or television work) payable to the lender

20.20 Experience suggests that musical instruments in museum collections should never be lent or hired for theatrical, film or television purposes.

20.21 All conditions should be discussed, fully understood, and agreed in principle before substantive arrangements for the loan are put in place.

Standards for research

21.1 The Forward Plan of every museum should reflect the museum's duty to undertake and/or to facilitate research. The museum's governing body should ensure that time and resources are provided to enable research to be done. It must formally approve a policy for research, which must be regularly reviewed.

Guidelines and notes

21.2 Research is fundamental to the function and purpose of a museum, though its form will vary greatly between museums of different sizes and types. The first responsibility of a museum curator is to understand the collections, their identification, history and condition. Some museums will be able to go on to carry out wider research based on those collections.

21.3 The museum's research policy should be written, preferably as part of the museum's forward or development plan or collections management policy. It should be realistic, relevant to the museum's collections, its staff and resources and to its public role.

21.4 Much of the value of collections lies in their potential for research. The museum should seek to develop close co-operation with researchers in all fields relevant to its collections.

21.5 The museum's research policy should include reference, where appropriate, to the circumstances under which destructive or potentially damaging research on accessioned instruments may take place, including whether a curator has delegated responsibility for such decisions.

21.6 The museum's research policy should be drafted in discussion with neighbouring and related museums and with appropriate local and national academic societies and specialist groups; advice can be given by staff at the relevant national and university museums.

21.7 Researchers should be encouraged to give the museum copies of their published research. Research that cites specific instruments should cite their accession numbers.

21.8 Research findings should be incorporated into the object's documentation as soon as possible, and preferably within one year.

21.9 Research without publication or proper documentation is of limited use. The museum should ensure that its own staff and, as far as it can, other researchers using its collections work to the highest academic standards, with proper citation of sources, including reference to accession numbers.

21.10 Visiting researchers should normally sign a written agreement, especially if they are likely to make commercial use of their work. This agreement would include:

- conditions for access, handling restrictions, etc
- arrangements for the museum to obtain copies of any resulting publications, or of research notes if the work does not result in publication
- arrangement for the museum to obtain copies of any measurements, or photographs taken
- proposed use of the information
- any copyright aspects
- warning of any hazards associated with specific instruments

A sample agreement is available via CIMCIM (see details in Annex C.3). See also Section 3:14 above.

Appendix E

Criteria for deciding whether an instrument should be played.

There are many factors to bear in mind when deciding whether or not an historic instrument should be played or put into playing condition. If the decision is in favour of use, then a host of new questions emerge.

Below are some of the pragmatic questions to consider when deciding whether to continue to use an instrument or to put it into a playing condition:

1. Has the instrument been in more or less continuous use since its manufacture or for a significant number of years?

An instrument that is already in working condition may actually suffer from being taken out of working condition. The resources allocated to it, however small, may disappear, causing it to fall into actual neglect. It may be that its continued use will not significantly detract from its technical and cultural value, and keep resources and attention focused upon it.

2. How much of the instrument's original action remains and what is its condition? Use engenders wear and tear, and these effects are very difficult (some would say impossible) to reverse. Conversely, halting use arrests wear and tear, and makes the instrument potentially more valuable as a study document. If the decision is taken in favour of continued use then a policy document or statement about why it is being used, how much it will be used, and under what circumstances it might be withdrawn from use should be drawn up in consultation with other museum professionals and instrument experts.

3. How rare is the instrument or its condition? Rare instruments or those with ephemeral parts and features still extant are more valuable as study documents than as working objects, and can be promoted as models to copy. Ideally, documentation resources should be directed towards these examples.

4. Are there other, better (i.e. more original) examples of this type extant and if so, where are they and are they being used? Similar examples in playing condition, especially if nearby, can satisfy the wish to hear instruments. On the other hand, if a better example of the type is being preserved unplayable nearby, pressure can be taken off that instrument by allowing the similar, but perhaps less original, object to be used. This approach encourages museums to consult with each other and to think outside their own four walls. Much can be gained from recognizing how their objects fit in with the national heritage or larger picture and from fostering cooperation.

5. Is it practical to preserve the present action as it is and make a working copy? This is another means of relieving the pressure on a working example, and arresting the effects of use. Nevertheless, there are drawbacks to this solution: it is costly in the first instance; it requires ongoing resources for maintenance; it means that the integrity of the original is compromised and subject to uneven wear and tear.

6. Is qualified expertise and resources available for regular maintenance, tuning and monitoring?

This consideration is too often overlooked, with the focus on raising funds for an initial restoration or repair. The need for continuing maintenance should be factored into any project that aims to restore an instrument to playing condition.

7. Is the environment safe and stable in terms of temperature and humidity?

All categories of instruments have a set of optimal conditions in which they should be housed, displayed and stored. Stringed keyboard instruments in playing condition are among the most vulnerable of historic artefacts because their structures are under the constant and considerable stress exerted by the tension of the strings. If such instruments are to be kept in playing condition, ensuring benign and stable environmental conditions for their display and use is absolutely fundamental to their continued well-being.

8. Are the financial resources available for the foreseeable future to support the use of the instrument?

Hearing instruments played can undoubtedly enhance the quality of visitors' experiences at a museum, but making such experiences available places serious responsibilities upon staff and management alike and demands a continuous commitment of financial resources. The costs of properly looking after playing instruments can, in time, dwarf the initial cost of any restoration. Many charitable institutions may feel that they cannot balance the initial restoration costs, let alone the ongoing maintenance costs, against the limited use that an historic instrument can reasonably be asked to give.

9. If the instrument forms part of a bequest, is its playability status stipulated?

If it is a condition of a bequest that the object be used, then there must be a strong bias in favour of fulfilling the condition as long as reasonably possible. Because benefactors cannot anticipate all the consequences of the conditions they stipulate or socio-economic factors which may complicate use, such conditions must be subject to review by a reasonable body composed, at least in part, of individuals known to be sympathetic to the benefactor's views.

Mimi Waitzman (2005)

Appendix F

Useful organisations and references

Listed below are the organisations and publications which can provide advice and guidance on the curation of musical collections through website and printed publications, and in some cases personal advice.

Organisation

Museums, Libraries & Archives Council (MLA)

The Museums, Libraries and Archives Council (MLA) is the national development agency working for and on behalf of museums, libraries and archives and advising government on policy and priorities for the sector. MLA's roles are to provide strategic leadership, to act as a powerful advocate, to develop capacity and to promote innovation and change. There are many factsheets on the MLA website available at xxx .

MLA's Accreditation Scheme, launched in November 2004, sets nationally agreed standards for UK museums. To qualify, museums must meet clear basic requirements on how they care for and document their collections, how they are governed and managed, and on the information and services they offer to their users. The Scheme builds on existing professional standards, which have been extensively revised and updated to reflect people's growing expectations of visitor attractions.

Resources formerly on the MLA website can now be found on the Collections Link Advisory Service at www.collectionslink.org.uk

Museum Development Officers, and individual Curatorial Advisers, can also be approached for advice on where to find specialist guidance. The Association of Independent Museums provides a useful listing on its website. <http://www.aim-museums.co.uk/museum-advisers.htm>

British Library Sound Archive. www.bl.uk/collections/sound-archive/nsa.html

BSI British Standards

BSI British Standards is the National Standards Body of the UK and develops standards and standardization solutions to meet the needs of business and society. They work with government, businesses and consumers to represent UK interests and facilitate the production of British, European and international standards.

BSI Management Systems operates world wide to provide organizations with independent third-party certification of their management systems, including ISO 9001:2000 (Quality), ISO 14001 (Environmental Management), OHSAS 18001 (Occupational Health and Safety).
<http://www.bsi-global.com/index.xalter>

Chartered Institution of Building Services Engineers (CIBSE), London,
<http://www.cibse.org/>

CIMCM - See International Committee of Musical Instrument Museums and Collections)

Galpin Society

Society for the study of musical instruments; website with links to publications about musical instruments. The Society has a worldwide membership and is open to all, of whatever nationality or country of residence. Institutions may enrol as members and enjoy all rights of representation - www.galpinsociety.org

Health & Safety Commission & Executive (HSC/HSE)

Britain's Health and Safety Commission (HSC) and Health & Safety Executive (HSE) are responsible for the regulation of almost all the risks to health and safety arising from work activity in Britain. Its job is to protect everyone in Great Britain against risks to health or safety arising out of work activities; to conduct and sponsor research; promote training; provide an information and advisory service; and submit proposals for new or revised regulations and approved codes of practice. Local authorities are responsible to HSC for enforcement in offices, shops and other parts of the services sector.

<http://www.hse.gov.uk/pubns/index.htm>

Institute of Conservation

<http://www.icon.org.uk/>

The Institute's Conservation Register holds detailed information on conservation-restoration practices from across the UK and Ireland. Practices meet specified criteria to be included and whether you are a private owner, or work in the heritage sector, you can use this website to search by object type and geographical location for the expertise you require. <http://www.conservationregister.com>.

International Committee of Musical Instrument Museums and Collections

(CIMCIM)

CIMCIM is one of 25 international committees of ICOM, the International Council of Museums, and was established in 1960. CIMCIM aims to promote high professional standards in the use and conservation of musical instruments in museums and collections. Professional matters where international co-operation is advantageous are discussed in detail in CIMCIM's Working Groups, which are set up as needs arise. The deliberations of Working Groups are usually published as CIMCIM Publications. Services offered by CIMCIM to members and non-members alike include a series of publications (see separate page) and CIMCIM-L, an e-mail discussion forum devoted to topics of relevance to the use and care of musical instruments in museums. The Website is managed by the University of Edinburgh.

Main site - <http://cimcim.icom.museum>

Terminology Page - <http://cimcim.icom.museum/itt.html>

MDA (formerly the Museum Documentation Association)

The purpose of MDA is to provide easy access to quality-assured resources, advice and support on collections management and use. It determines standards for museum documentation, publishes appropriate guidance, and offers general advice on all aspects of documentation. It publishes a range of factsheets online.

www.mda.org.uk

MDA's publication SPECTRUM : the UK museum documentation standard (2nd ed. 1997) SPECTRUM: The UK Museum Documentation Standard represents a common understanding of good practice for museum documentation, established in partnership with the museum community. It contains procedures for documenting objects and the processes they undergo, as well as identifying and describing the information which needs to be recorded to support the procedures. See <http://www.mda.org.uk/spectrum.htm> , where an electronic version can be downloaded.

MDA manages the Collections Link advisory service established in 2006 for museums, libraries and Archives. See <http://www.collectionslink.org.uk>.

Museums Association (MA)

MA's Code of Ethics for museums and those who work in them includes guidelines for acquisition and disposal of objects, and guidelines for commercial activities and access. <http://www.museumsassociation.org> or from the Museums Association, 24 Calvin St, London E1 6NW, Tel: 020 7426 6970, Fax: 020 7426 6961,

See in particular, MA's:

Code of ethics for museums, 2002.

Museum Practice, an in-depth and comprehensive information source for people working in museums and galleries, available a magazine and an online archive (accessible to subscribers and members of the MA). It addresses the key practical, technical and management issues that face museums, and provides expert analysis on subjects such as Access, Learning, Marketing, Interpretation, Collections, Conservation, Multimedia, and Management.

The National Archive. www.nationalarchive.gov.uk

National Preservation Office (NPO)

The National Preservation Office (NPO) provides an independent focus for the preservation of and continuing accessibility to cultural heritage materials held in libraries, archives and museums in the United Kingdom and Ireland.

<http://www.bl.uk/services/npo/publicationsleaf.html>

Society of Archivists, www.archives.org.uk

Standing Conference on Archives and Museums, Information sheets available at www.archivesandmuseums.org.uk/scam/Infosheet4.htm

UK Registrars' Group (UKRG)

A forum for communication and co-operation between registrars and professionals in other fields related to the work undertaken by registrars. Online publications

<http://ukrg.org/>

In addition to those listed, University and other specialist organisations often understand best the importance of musical instrument collections, and should be contacted with specialised queries.

References for each section

Section A Procedural standards

1. Acquisition and disposal
2. Collection management
3. Documentation
4. Protection of primary records

MLA Accreditation Scheme for Museums in the United Kingdom, which includes a model Acquisition and Disposal Policy

Benchmarks in Collection Care (see www.collectionslink.org.uk).

Condition Assessment Tool (CAT) CD-ROM and available online (see www.collectionslink.org.uk)

SPECTRUM and other associated information from MDA, which includes an introduction and detailed procedures for cataloguing, collection descriptions etc. For those new to the subject, two good introductions are:

Facts & artefacts: how to document a museum collection (second edition, 1998) and *Cataloguing made easy: how to catalogue your collections* (second edition, 2002) both by Stuart A. Holm and available from MDA www.mda.org.uk.

Arts and Humanities Data Service (AHDS), *Standards for Digital Information Interchange*. <http://ahds.ac.uk/resource/standards.html>

The Data Archive. Guide to depositing data. The Acquisition Section, The Data Archive. University of Essex, Wivenhoe Park, Colchester, Essex, CO4 3SQ. <http://dawwww.essex.ac.uk/>.

Davies, Stuart, *Producing a forward plan*, Museums & Galleries Commission, 1996 (see <http://www.collectionslink.org.uk>)

Museums Association, Code of ethics for museums, 2002

The National Archives *Framework of Standards*
www.nationalarchives.gov.uk/news/pdf/framework.pdf

Pickford, C., et al, *Preservation and Conservation: a guide to policy and practices in the preservation of archives*, Best Practice Guideline 4. London: Society of Archivists, 1997.

SCAM, Code of practice on archives for museums and galleries in the United Kingdom. Standing Conference on Archives and Museums (SCAM), 2002. Available at <http://www.archivesandmuseums.org.uk/scam/code.pdf> .

Ward, A. 1990. *A Manual of Sound Archive Administration*. Aldershot: Gower Publishers.

Many former MGC publications are available from Collections Link website
www.collectionslink.org.uk

Section B Collection Care and Maintenance standards

5. Conservation
6. Care of instruments permitted to be played
7. Protection from physical damage, and health and safety standards
8. Protection from dust and dirt, pollutants, pests and light
9. Moving musical instruments

Institute of Conservation has a range of factsheets covering conservation now available
www.conservationregister.com.

SMC's Conservation and Collections Care Factsheets and their *Condition Assessment Tool* (CAT) database can be downloaded from the Collections Link website
www.collectionslink.org.uk.

Barclay, R. L. 2004. *The Preservation and Use of Historic Musical Instruments: Display Case and Concert Hall*, Oxbow Books <http://www.oxbowbooks.com/>

Barclay, R. L. ed. 1997 *The Care of Historic Musical Instruments*. Published jointly by the Canadian Conservation Institute, Museums & Galleries Commission, and CIMCIM. Contributors: Robert L. Barclay, May Cassar, Friedemann Hellwig, Cary Karp, Arnold Myers, Scott Odell, and Mimi Waitzman. This can be viewed online from the CIMCIM website
<http://www.music.ed.ac.uk/euchmi/cimcim/iht/index.html>

Barclay, R. L. 1983. 'Instrument Mounts'. In *Anatomy of an Exhibition: The Look of Music*, ed. R. L. Barclay. Ottawa: International Institute for Conservation, Canadian Group.

Barclay, R. L., ed. 1982. 'The Care of Musical Instruments in Canadian Collections'. *Technical Bulletin* 4. Ottawa: Canadian Conservation Institute.

Benchmarks in collection care for museums, archives and libraries: a self-assessment checklist (see www.collectionslink.org.uk)

Blades N., Oreszczyń T., Bordass B. And Cassar M., 'Guidelines on Pollution Control in Museums Buildings', *Museum Practice*, Issue 15, Museum Association, London, 2000.

Cassar M., *Environmental management. Guidelines for museums and galleries*, MGC with Routledge, London and New York, 1995.

CIMCIIM (International Committee of Musical Instrument Museums and Collections) publications:

Recommendations for Regulating the Access to Musical Instruments in Public Collections (1985)

Recommendations for the Conservation of Musical Instruments: An annotated bibliography (1993).

Museum Copies of Musical Instruments (1994)
See <http://www.music.ed.ac.uk/euchmi/cimcim/ipx.html>

Halahan, Frances and Plowden, A, *Looking After Antiques*, National Trust, 2003.

Eliason, Robert E. and Friedemann Hellwig. 1986. 'Musical Instrument Exhibitions in Scandinavia'. *CIMCIM Newsletter*. Special Issue.

Finney, Libby *Basic remedial conservation and environmental monitoring*, Association of Independent Museums, 2000 (AIM Focus paper 13) -
http://www.museums.org.uk/aim/AIM_Publications/aim_publications.html

Health and Safety Executive (also their links for COOSH, RIDDOR and much else)
www.hse.gov.uk
(For volunteer health and safety matters, insurance policies, and a range of other information concerning volunteers, see the National Centre for Volunteering
<http://www.volunteering.org.uk>)

Horie, C. V. 1992. 'Conservation and Storage: Leather Objects'. In *Manual of Curatorship*, eds. J. M. A. Thompson et al, 340-345. Oxford: Butterworth-Heinemann.

Museums & Galleries Commission, *Larger & working objects : a guide to their preservation and care*, 1997, available at www.collectionslink.org.uk

The National Trust Manual of Housekeeping, The National Trust, 2005.

Pinniger, D and Winsor, P, 1997, *Integrated pest management: A guide for museums*.
<http://www.collectionslink.org.uk> (see www.collectionslink.org.uk)

Touring Exhibition Group Handbook (www.teg.org.uk). For standards and guidelines for moving museum objects, including handling, packing, carriers and agents and couriers, see also www.collectionslink.org.uk.

Section C Building Management Standards

10. Buildings and environment
11. Relative humidity and temperature

Collectionslink website www.collectionslink.org.uk includes:

Working with independent conservators, 2000

Relative humidity and temperature pattern book: a guide to understanding and using data on the museum environment. 2000

Museum collections in industrial buildings: a selection and adaptation guide. 1996

Camuffo D., *Microclimate for Cultural Heritage, Developments in Atmospheric Science* No 23, Elsevier, Amsterdam, 1998.

Cassar M., *Environmental management. Guidelines for museums and galleries*, MGC with Routledge, London and New York, 1995

Chartered Institution of Building Services Engineers (CIBSE), various CIBSE Guides, see <http://www.cibse.org/>

Staniforth, Sarah, Bob Hayes and Linda Bullock. 1994. 'Appropriate Technologies for Relative Humidity Control for Museum Collections Housed in Historic Houses, in *Preventive Conservation: Practice Theory and Research*, eds. Ashok Roy and Perry Smith. 123-128. London: International Institute for Conservation.

Thomson G, *The Museum Environment*, 2nd Edition, Butterworth Heinemann, Oxford, 1994.

12. Physical protection from theft
13. Perimeter Alarms
14. Invigilation
15. Key security
16. Protection from fire
17. Protection from flood
18. Disaster planning

Security advice previously available on the MLA website is now at www.collectionslink.org.uk

Also, see the policy statement relating to Education and Access, eg. the Education Policy Statement of Edinburgh University's Collection of Historical Musical Instruments <http://www.music.ed.ac.uk/euchmi/ugmp2000.html>.

This details the access permitted to specific groups, and includes (4.1) 'Specialist visitors will be given access to items in the collections by appointment. Access will be consistent with the CIMCIM "Recommendations for Regulating the Access to Musical Instruments in Public Collections" (1985).'

CIMCIM Recommendations - <http://cimcim.icom.museum>

Fire Prevention Officer and the local authority Building Control Department can provide advice..

HMSO's guidance entitled *Fire Safety: An Employer's Guide* <http://www.archive.official-documents.co.uk/document/fire/contents.htm> assists employers in meeting their fire safety responsibilities in the workplace

Kidd, Stewart, *Fire risk management in heritage buildings* (Historic Scotland, Edinburgh, 2001), ISBN 900168715

The Fire Service and increasingly the Environment Agency will provide advice on the possibility of flooding and protection methods.

Floodline is a 24-hour telephone information service (0845 988 1188) operated by the Environment Agency in England and Wales and by the Scottish Environment Protection Agency (SEPA) in Scotland. See www.environment-agency.gov.uk and www.sepa.org.uk.

Emergency manual for historic buildings and collections published in 2001 East Midlands Museum Service as an interactive CD and can be ordered online www.emms.org.uk

M25 Group Disaster Planning website <http://www.m25lib.ac.uk/m25dcp/>

The Institute of Conservation's Conservation Register maintains a list of private conservators throughout England, Scotland, Wales and N Ireland and a list of suppliers of materials. www.conservationregister.com, tel 020 7785 3804.

Section 4 Access and Education standards

19. Access and education
20. Loans
21. Research

MLA's Learning and Access team aims to help museums, archives and libraries develop accessible and inclusive collections and services that provide learning, inspiration and enjoyment for everyone. The team takes the approach that the learning agenda cannot be separated from the access agenda. This broad understanding of the term access also informs the work of the team, which covers cultural diversity, disability and social inclusion issues. MLA web pages provide an introduction to each area, and hotlinks to detailed advice and guidance.

Many museums provide excellent website information for school and lifelong learners, eg the Horniman Museum, London, which holds a major collection of musical instruments <http://www.horniman.ac.uk/education/index.php>

Education for smaller museums. – Association of Independent Museums, 1997
<http://www.aim-museums.co.uk/>

MLA's Disability Portfolio, a collection of 12 guides on how best to meet the needs of disabled people as users and staff in museums, archives and libraries. It gives invaluable advice, information and guidance to help overcome barriers and follow good practice. Also available as hard copy from mo@centralbooks.com for museums, archives and libraries and disabled people working in the sector, in print (12 point clear print) ; large print (15 point); audio cassette and braille (both with brief descriptions).

Mencap's accessibility services: Mencap can help you to make your information more accessible to people with a learning disability.
http://www.mencap.org.uk/html/accessibility/accessibility_services.htm

Designing exhibitions to include people with disabilities : a practical guide , Gail Nolan (NMS Enterprises Ltd, 1997). Email publishing@nms.ac.uk

Royal National Institute for the Blind (RNIB)
See it Right pack: Practical advice on designing, producing and planning for accessible information.
http://www.rnib.org.uk/xpedio/groups/public/documents/publicWebsite/public_seeitright.h
[csp](#)

Within reason: access to services for blind and partially sighted people (RNIB, 1998). Available from RNIB UK National Customer Service Centre, Bakewell Road, Orton Southgate, Peterborough, PE2 6XU, Tel: 0845 702 3153 or email cservices@rnib.org.uk

Sign Design Society provides advice on good signage and other associated aspects of access - <http://www.signdesignsociety.co.uk/>

Most organisations now include a section on disability access on or via their websites, eg English Heritage's Easy access to historic properties - http://www.english-heritage.org.uk/Filestore/publications/pdf/free/easy_access.pdf

For validating webpages for disability access, use 'webxact' free online service - <http://webxact.watchfire.com/>. This replaces the previous 'Bobby' website).

Directions in diversity: current opinion and good practice (Audit Commission, 2002). Available at <http://www.auditcommission.gov.uk/reports/>, from the Audit Commission, 1 Vincent Square, London SW1P 2PN, and Tel: 0800 502030 or Email: enquiries@audit-commission.gov.uk

UK Registrars' Group (UKRG) has issued a number of publications aimed at registrars or professionals in fields related to the work undertaken by registrars.

Standard Facilities Report. The Facilities Report was devised by the United Kingdom Registrars' Group (UKRG) in consultation with the Museums, Libraries and Archives Council. It lists all requirements to be considered during the loan of a work. They are written from the lender's perspective administering the object loan to an exhibition, and are aimed at all people who either organise or carry out courier duties primarily in the context of the fine arts, but are also intended to be widely relevant to the care and transit of a range of objects for any purpose, be they loans or acquisitions'.

Security Supplement - This Facilities Report supplement has been devised by the United Kingdom Registrars' Group (UKRG) in consultation with the UK Museums Security Adviser at Museums, Libraries and Archives Council for use with the United Kingdom Standard Facilities Report

Display case supplement - This supplement was formulated by the United Kingdom Registrars' Group (UKRG) in consultation with the Victoria & Albert Museum, London. The supplement will enable lenders to assess the practicalities involved in making loans which need to be shown in display cases or vitrines. It is intended to help both borrowers and lenders identify potential problems and reach agreement on how these can be resolved.

UK Courier Guidelines - written from the lender's perspective administering the object loan to an exhibition, and aimed at all people who either organise or carry out courier duties primarily in the context of the fine arts, but are also intended to be widely relevant to the care and transit of a range of objects for any purpose, be they loans or acquisitions.

All on webpage <http://ukrg.org/Index.php>

UNESCO, 1981. Procedure and Conservation Standards for Museum Collections in Transit and on Exhibition. Paris: UNESCO.

National Museums Director's Conference. 2003. *Loans between National and Non-national Museums* – New standards and practical guidelines. London. NMDC.

Arnold-Foster, Kate and Hélène La Rue, *Museums of Music: A Review of Musical Instrument Collections in the United Kingdom* (HMSO, London, 1993)

Bevan, Clifford. 1990. *Musical Instrument Collections in the British Isles*. Winchester: Piccolo Press.

Intellectual Property – Museum Copyright Group see Collections Link website
www.collectionslink.org.uk

Appendix G

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Graeme Cannon, Glasgow Museums
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David Eveleigh, Blaise Castle House Museum
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Henry Middleton, Maidstone Museum and Art Gallery
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Cathy Proudlove, Norfolk Museums Service
Jonathan Ranger, National Piano Centre & Information Service
Fergus Read, East Midlands Museums Service
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Adam B Ritchie, City of Dundee Art Galleries & Museums
Pauline Rushton, National Museums & Galleries on Merseyside
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Kate Starling, Museum of London
John Stevenson, Commonwealth Institute
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