

As a result:

1. Finally, most professions involved with conservation have officially examined, approved and recognised our official documents.

2. Finally, with one single voice, they have given their support to the claims of our profession.

3. This document, adopted during a European Summit sponsored by the European Union and DGX, can henceforth be used in our external relations. It will carry great weight in our fight for recognition of the profession.

I do believe that this will become a historic document, which will mark an important step in the development of our craft.

On behalf of E.C.C.O., I would like to thank the Secco Suardo Foundation, its associates and all participants for the work that has been done and the support they gave us.

Within E.C.C.O., this recognition is welcome and heartening to all those who have dedicated themselves to this fight since the beginning. At a time when many of the pioneers have or will be handing over to others, this means

recognition of the quality of work done under difficult circumstances, and it also means encouragement to the new team to continue the fight and renew their efforts on the basis of this Pavia Document, which I recommend you all to read.

*P. Masson  
President, E.C.C.O.*



# The Ten Agents of Deterioration

An issue by issue guide to the risks facing  
museum collections



## 4. Theft & Vandalism

## Introduction

This is the fourth part of our series on the Ten Agents of Deterioration; the risks facing museum collections. Compared to the previous topics covered (and I'm sure those to follow) the response has been rather slim. Possibly this is a good thing in that we haven't had to deal with too many cases resulting from theft and vandalism (as opposed to the amount of articles we received relating to 'pests').

The article from Ipswich museum relates to preventative conservation measures taken in protecting against theft and vandalism. This is an area that many of us involved in the 'conservation' of collections do not deal with directly as it often comes under the remit of 'security'.

The next topic to be covered in the series will be relative humidity and temperature. Articles would be welcome on similar 'preventative'/controlling measures and experiences of materials and products used. Also, have you conserved particular objects affected by extremes of RH/temperature? Let us know of methods adopted in particular projects; have these been dependant upon the locality of the work?

*Donna Hughes*

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## Vandalism within the National Museum of Wales

Theft and vandalism within the 'Natural History in Wales' galleries (NMGW) is not a serious problem, however through the introduction of market testing, the number of warding staff has been greatly reduced, with just one warder being on duty for up to three galleries. During this time the number of incidents of vandalism and theft have greatly increased.

The Natural History in Wales galleries replicate habitats within Wales including woodland,

moorland alpine, maritime and wetland. On entering the first gallery you are faced with a large sea cliff which juts out to form a rock platform dividing the centre of the gallery. Beneath the rocks are pools. Seabirds line the ledges of the cliff and are well out of reach. However, the platform runs closer to the floor and here birds, shells and seaweed are within easy reach and although the displays are raised, no barriers restrict access. Starfish which were adhered to the sandy floor have been removed by force, with just small pieces remaining and sea shells are greatly depleted. Six bird specimens are dotted along the floor and cliff and all are in good

condition. There are two rock pools made of perspex which have been damaged. One shows a cross section through a rock pool which has been cracked probably by someone attempting to lift the lid and reach inside the pool, breaking the seal. The second pool has been trodden on and the perspex has split. The perspex is now at two different levels.

The sea cliff then leads into the woodland gallery. An oak tree lies against the wall, half in winter and half in summer. The leaves and twigs are made of plasticised fabric and the twigs are either plastic or the real thing. The branches hang down over the gangway and these are frequently tugged at. The leaves and twigs litter the floor. At the foot of the tree are primroses made of plastic and a family of three badgers which are close enough to be touched. The flowers are in easy reach and the petals lie on the ground where they have been broken off. The plants are very misshapen. The nearest badger is frequently touched and stroked and occasionally clumps of fur are pulled out. Opposite in the winter scene is a fox and this too is frequently pulled and stroked. What makes this scene more tempting is the false snow that can

be collected in handfuls and thrown at one another, thus the snow is fairly bare on the ground.

These first two galleries experience plenty of unwanted interaction but the dioramas have managed to withstand a lot of the attention.

Unsupervised, children tend to let their curiosity take control and the stepping onto dioramas and touching and stroking displays is all a part of this. This is not regarded as vandalism but as general wear and tear associated with time and children. A more worrying concern is when the displays are damaged on purpose, and not just in one area.

In June 1996 a small group of teenagers went on the rampage and pulled out specimens and material from within dioramas of all three galleries. The worst affected areas were the wetland and alpine scenes, areas farthest away from the main hall and not widely supervised. The wetland display consists of a bordered off area standing about two foot high. Beyond this is a replica lake with reed beds and several small birds and their nests. Large clumps of the reeds were pulled out, a sedge warbler nest was dropped on the floor and one bird was taken. Three small branches of the alder had been

snapped off (and later stuck back on with sellotape, which drew more attention to the breaks).

The mountain scene has a small two foot barrier and beyond this is a replica mountain with birds and flowers. The plant models were all made of wax and had been crushed, some taken out and lost, some left where they were. A ring ouzel was taken and has not yet been recovered.

Other areas that are low down, badly lit or out of view of the warder seem to be the most likely to experience vandalism and theft. A small diorama adjacent to the mountain scene had an adder curled up in the foreground. This was so frequently damaged that the conservator removed it from display. A rabbit from the same scene has now been moved to the very back of the display to prevent further damage.

The majority of displays are in glass cases, however the success of the galleries is undoubtedly due to the life-like and impressive dioramas. The fact that they are drawing so much attention, if not a little too much physical attention, indicates that they are at least getting a message across and firing

the curiosity. The mindless destruction is thankfully rare and does not go undetected. The damage made by the teenage group was quickly picked up on, but it did raise the question of putting security cameras in all the galleries. As a similar incident has not happened since, it was believed to be purely opportunist on the teenagers' part, acting on the fact there was only one warder present that day.

*Victoria Purewal  
Botanical Conservator  
NMGW*

## Theft from Hampshire County Museums Service

The problem with complete strangers wandering round a site with the appearance of knowing what they're doing can often be a problem to staff who may not wish or be bothered in challenging them. Uniforms or official looking overalls can also discourage challenges until something goes missing. In this case it was a credit card of a member of staff. Since then security has tightened up considerably and even well-known visitors are not free to wander around the site and putting extra burdens on staff who do not feel the need to accompany their visitors to the loos or staff room for tea. Ah well no doubt the usual tight schedules mixed with the inevitable no incident apathy will mean that the usual laxity will soon return? I hope not but I do hope that our trustees will have a little more freedom!

Once of the problems of being situated near 'privileged housing' (council estate) is groups of children trying their luck at tossing pebbles at windows or loosening nuts on overnight-parked vehicles. About a year ago our site manager was physically threatened by a not

so young 'child' after he asked him and his followers to refrain from trespassing on the site and testing the 'breakability' of the windows. After some police involvement the matter has not re-occurred. However both instances show the need to stay alert!

*Simon Moore  
Hampshire County Museums*

## Lightning Strikes Twice?

In July 1990 a young woman walked into Liverpool Museum, smashed a display case on the Egyptian gallery with a cobble stone and removed an artefact. She put the item into her handbag but made no serious attempt to escape with it. The artefact was the mummified hand of a woman, thought to have been a high priestess, from Saqqara, dating from the Ptolemaic (Roman) period, 332-30 BC (M11438)(<sup>1</sup>). The hand is covered with a brittle black bituminous resin partly coated with gold leaf and has four gold and lapis lazuli rings on the fingers. It has a high monetary value. It is unlikely, however, that the hand was targeted for

materialistic motives. The woman seemed drawn to this item from some more abstruse 'reasoning' - having gained possession of the hand she sat down on the floor, made no attempt to evade arrest or deny culpability and said not a word to anyone.

The gallery was cleared of visitors immediately and the affected display case and surrounding area were left untouched until a conservator (myself) arrived at the scene. The area was photographed, all artefacts were removed from the case to the curator's office and debris in the display case and on the floor was checked for fragments of artefacts. The artefacts were carefully examined, reported on and individually photographed. The thumb nail from the hand was dislodged and had to be re-adhered (using Paraloid B72 methyl methacrylate adhesive). Other artefacts in the case (all grave goods) included stone canopic jars and small wooden items. Many were chipped and scuffed but it was difficult to assess whether new damage had occurred due to the absence of any previous condition reports or photographs - the items had been displayed for about 20 years.

We will probably never know why this happened, but how did it happen? What security measures were in place?

- We have a bag check for all visitors coming into the museum, generally carried out quite cursorily. Should we embarrass and delay visitors by removing every item from their bags? If not, it is easy enough for a knife, a small can of spray paint, a hammer or even a set to be concealed.
- We did not at this time have a cloak room where visitors could leave bags. But cloakrooms do cost money and space (attendants, rails, lockers, etc.) and, more importantly, could increase the possibility of bomb threats.
- We do have attendant staff on the galleries - but funding cuts mean we now have only one attendant on each floor and given the size and particularly the layout of our galleries this inevitably means all areas can not be guarded constantly.
- The display case itself is reasonably secure (solid wooden base, glass top and

front, built against a back wall and adjoining other similar cases) - we need a team of joiners to remove the glass. This was irrelevant to the culprit, evidently not a practised art thief, who was obviously not concerned with stealth, her own safety nor keeping the artefacts intact.

- The case was not alarmed, but what if it had been? The damage would have been done before the alarm went off, and the culprit was not going anywhere anyway.
- What about the glass - it was not toughened glass, it was not laminated, it was old. It was easy enough to smash. Perhaps this is where we can most economically strengthen our defences.

In fact, considering this as a one-off incident, an isolated case, a freak occurrence, the most sensible thing would be to lobby for more staff on the galleries but otherwise keep our fingers well away from the panic button. As Jonathan Ashley-Smith has pointed out "Theoretically, there is no minimum risk but, in practice, there are diminishing returns in the effort needed to

reduce the risk."<sup>(2)</sup>. After all, what are the chances of something similar happening again in the next, say, hundred years?

Well actually ...

... In July 1997 the same woman repeated the act, targeting the same item, this time taking a hammer to the display case instead of a set. Strangely enough, the thumb nail was again displaced. Despite searches of the trolley, the gallery floor, the display case, nearby surfaces and the box of swept up glass and other debris, it was not found.

Hmmm ... ok, so maybe we do need to take a little more interest.

In the current (and ongoing) climate of funding cuts it is unrealistic to expect **all** museums to provide state-of-the-art security for all items on display (and those in store), but are there categories of artefacts other than the most valuable and the rarest that we should give enhanced protection to? What are those categories?

What do people attack in museums and galleries? - It is difficult to tell until they do it. We can sometimes get a clue by asking the question - Why do people attack artefacts? To some extent we can anticipate attacks which might be based on


political or religious fervour. But our experience outlined here illustrates that objects can be damaged out of much less obvious motives - perhaps based on some personal conflict, insanity, anger at society in general, a simple demand for attention. Who knows? It is not even strictly speaking correct to term the above incidents acts of vandalism - the damage caused was obviously not wilful; nor were there attempts at theft; apparently just misguided attempts to achieve contact with a coveted item. We can not predict human behaviour in cases like this. But perhaps more openness and greater circulation of information around the museum world might give us some clues. Anyone feel like organising a conference?

*Tracey Seddon  
Senior Organics Conservator  
The Conservation Centre, NMGM*

## References

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2. Ashley-Smith, Jonathan  
*Consider the Benefits, Calculate the Risks.* Talk given at a joint meeting of ICOM-CC, the conservation committee of the International Council of Museums and ICEE, the International Committee for Exhibition Exchange, in a session called "Exhibition or Destruction", ICOM general meeting. Stavanger, Norway, July 5 1995. Unpublished. On Internet. p8.



## Safety Film in Display Areas

In 1992 new health and safety regulations concerning glazing came into force, which had an immediate effect on museums. The regulations affect public, stall areas and stores, and concern doors, barriers, display cases and windows.

The Ipswich Museum building in High Street contains a wide variety of cases, dating from the 1880's to the present. There is an enormous area of exposed glass. The glazing is a combination of spun (early cases), float, toughened and laminated glass, ranging from about

2.5mm to 7mm thick. The two largest areas are the "Jungle case" with an area of 22.7 m<sup>2</sup> and the Giraffe case (erected in 1909) with an area of 67.5 m<sup>2</sup>. This is believed to be the largest single, glazed, mounted specimen in the UK.

Although there have been few acts of vandalism in recent years, there is still the risk of an accidental breakage of glass cases. In the most recent event two years ago a 2.5mm thick pane cracked in an 1881 wall case, when a visitor leant their head on it "to get a better view of the objects". However, all cases installed since 1992 are glazed in toughened glass, which is visibly marked to show that it conforms to BS6206.

The following is an extract from the 1992 Health Safety and Welfare regulations concerning glazing,

### **Windows, and transparent or translucent doors, gates and walls.**

*(1) Every window or other transparent or translucent surface in a wall or partition and every transparent surface in a door or gate, shall where necessary for reasons of health or safety -*

*(a) be of safety material or be protected against breakage of the transparent or translucent material; and...*

*(b) be appropriately marked or incorporate features so as, in either case, to make it apparent, with reasons. A risk assessment and survey of the museum divided the glass into three categories: high, medium and low. All glass has to show the safety mark.*

*147 Transparent or translucent surfaces in doors, gates and walls and partitions should be of safety material or be adequately protected against breakage in the following cases:*

*(a) in doors and gates, and door and gate side panels, where any part of the transparent or translucent surface is at shoulder level or below.*

*(b) in windows, walls or partitions, where any part of the transparent or translucent surface is at waist level or below, except in glass houses where people there will be aware of the presence of glazing and avoid contact. This paragraph does not apply to narrow panes up to 250mm wide measured between glazing beads.*

148 'safety materials' are:

- (a) materials which are inherently robust, such as polycarbonates or glass blocks; or
- (b) glass which if it breaks, breaks safely; or
- (c) ordinary annealed glass which meets the thickness criteria in the following table

Nominal thickness	Maximum size
8mm	1.10m x 1.10m
10mm	2.25m x 2.25m
12mm	3.00m x 3.00m
15mm	any size

149 As an alternative to the use of safety materials, transparent or translucent surfaces may be adequately protected against breakage. This may be achieved by means of a screen or barrier which may prevent a person from coming into contact with the glass if he or she falls against it. If a person going through the glass would fall from a height, the screen or barrier should also be designed to be difficult to climb.

150 A transparent or translucent surface should be marked where necessary to make it apparent. The risk of collision is greatest in large uninterrupted surfaces where the floor is at a similar level at each side, so that people might reasonably think they can walk straight

through. If features such as mullions, transoms, rails, door frames, large pull or push handles, or heavy tinting make the surface apparent, marking is not essential. Where it is needed, marking may take any form (for example coloured lines or patterns), provided it is conspicuous and at a conspicuous height.

151 The term 'safety glass' is used in a British standard which is concerned with the breakage of flat glass or flat plastic sheet. Materials meeting that standard, for example laminated or toughened glass, will break in a way that does not result in large sharp pieces and will fulfil paragraph 148 ( b ) above. 'Safety materials' as used in these Regulations includes safety glass, but also other materials as described in paragraph 148 ( a ) and ( c ) above. There is also a British Standard which contains a code of practice for the glazing of buildings

152 Building regulations have similar requirements. Advice may be obtained from local authorities.

Since 1992 all new glazing has to be safety glass marked with the British Standard kite mark BS 2602.

A risk assessment survey in 1996 carried out on all Ipswich Borough Council buildings open to the public divided the glazed areas into to three categories; high, medium and low risk. High risk areas included exposed glass below shoulder height, medium risk glass that was touchable or covered a smaller areas, while low risk areas were those above shoulder height.

It would have been prohibitively expensive to re-glaze all the display cases, (and in the case of the Giraffe case an exceedingly interesting job) with safety glass, and impractical to place high barriers in front of them. The alternative was to cover the glass with a plastic safety film.

For financial reasons the treatment has been carried out over the last few months in three stages, high risk areas first followed by medium and low risk areas. All treated glass has a visible marker confirming that it conforms to BS6206 class B.

Two firms have been involved in applying film on the glass using plastic safety films produced by *Invicta* window films and *Armour-guard* film produced by MSC. The film is applied to the outside of the glass and the procedure is

fairly straightforward. The film is cut to size; the glass is thoroughly cleaned to remove dust, grease and fingerprints; it is sprayed with water and the film applied. Initially the film is attached by surface tension and can be slid into its final position, a roller is used to flatten out the film and move trapped air bubbles. Once the water has evaporated the film bonds to the glass and cures over several days.

The work took over two weeks to complete, and although there was minimal disruption, parts of galleries had to be closed while the work was in progress.

Conservators and keepers were not involved in briefing the companies who completed the work. It was therefore not possible to address in detail any display or conservation requirements of the film or its application. We have had little conservation information on the film, apart from learning that it combines safety protection and ultraviolet light filters, removing 95% of UV light. We have no information about its physical and chemical makeup nor its long-term properties (although it comes with a ten year guarantee). There is no information on: whether the film will discolour with age, become brittle or drop off; how easy it will

be to remove if it needs replacing; if it will react with human sweat or survive the wear and tear of people touching it. Even the best way of cleaning the surface without scratching or abrading the film is unknown, and ordinary glass cleaning fluids are no longer usable. However common sense suggests that abrasion may eventually wear the film away or alter its transparency.

When the film was applied to some older cased mounts, labels had to be removed from the outside of the glass. There is some debate over a suitable method of attaching new labels, i.e. if a label needs replacing again how can it be removed without damaging the film. One suggestion given was that only *blu-tack* could be used to attach labels, this is not an option.

The run off from excessive spraying of water has entered some cases at the glazing beads. This has caused some water streaks on the inside of glass, a temporary increase in internal humidity and a very slight staining of some background materials. Specimens were not removed from cases during the application, however there is no evidence that any have been damaged.

A more noticeable affect is obvious where the area of glass has required more than one sheet of film to cover it. Sheets of film have been applied with an overlap up to 5mm at the join. This has left a visible and distracting line at eye level on several cases.

While the work has improved the safety of the galleries, and brought us in line with health and safety regulations, more detailed consultations with staff directly concerned could have lead to a much more satisfactory outcome.

*David J. Lampard*  
*Keeper of Botany*

*Ipswich Museums and Galleries*



## Natural Science Conservation travelling lectures

The Natural Science Conservation Group is particularly concerned with educating institutions and individuals with its work. Natural science conservation is not a familiar discipline nor is it fully understood. One aim of the NSCG is to promote the work of the group through visiting schools, colleges and Universities. Through talks, lectures and slide shows the work of natural science conservators around Britain can be brought to the individual.

There are many more courses in conservation being established which is in relation to the rise in demand. However, natural science conservation courses are still poorly represented and so the NSCG felt it would be worthwhile to speak to students and lecturers alike to inform them of this particular area of conservation that they could enter into after qualifying. Once the awareness and interest is generated then the demand for more information and therefore training should follow.

The University of Derby has recently embarked upon a conservation science course that is linked to the chemistry department. It is in its first year and was instigated by Dr Trevor Brown, a conservation scientist. A member of the NSCG spoke to a group of students and lecturers from this discipline about the work of natural science conservators within the UK and the influence of NSCG on natural science collections. The lecture was well received with a good deal of feed back afterwards.

Through this communication the wide and varied work actually carried out by British natural science conservators is made easily accessible, and the NSCG can be represented first hand.

*Vicky Purewal*  
*NMGW*

