

# Assess and manage risk in collections care

A Collections Care *How To* Guide



Assess and manage risk in collections care: a Collections Care *How To* Guide  
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# Collections Care *How To* Guides

This How To Guide is published by Norfolk Museums and Archaeology Service in partnership with the Collections Trust. It provides an introduction to the assessment and management of risk in the context of the care of museum collections.

Many organisations now use risk assessment and risk management as a decision-making tool, especially for managing risks to health and the environment. By identifying threats and associated risks, organisations are finding that they can target resources to protect people and property more efficiently through the planning process. In doing so, risks are prioritised and more substantial threats are managed before lesser threats.

The museum community is also turning to risk management as a planning tool, both at an organisational level, and also as a means of preserving their collections for long term use by the public. Risk assessment is becoming embedded in collections care practice, helping museums to set priorities for collections care and invest strategically in projects and infrastructure to protect their collections.



# Assess and manage risk in collections care/

**W**ithin a museum, risk assessment and risk management are used in a variety of contexts, for example to ensure adequate health and safety measures are in place for staff and visitors, to inform business planning and to develop an effective emergency plan.

This guide will consider how to use risk assessment as part of a risk management approach to collections care.

By applying the basic principles of risk management, a simple system can be developed for use within a museum of any size to help prioritise and inform the allocation of collections care resources.

## Definitions

**Threat** - a hazard, or the cause of an unwanted event.

**Risk** - the chance or likelihood of the threat, or unwanted event, occurring.

**Risk Management** - involves identifying, assessing, and prioritising risks. The identified and prioritised risks then inform a planned programme to minimise, and control the probability and impact of identified threats to the collection.

**Risk Assessment** - an activity to calculate an objective view of the magnitude of the risks to the collection, or item. It includes an analysis of the probability and the likely impact of an unwanted event or threat.

## A Risk Management approach in four steps....

Everyone makes multiple risk assessments and decisions every day. For example: a simple decision about whether, or not, it is safe to cross the road, requires the same four basic steps that we will employ in collections care risk management.

Crossing the road in the morning – risk assessment on seeing an approaching car			
1. Identify the threat	2. Assess the magnitude of the risk (probability and severity/spread)	3. Evaluate costs and benefits of each strategy to inform your decision	4. Mitigate
There's a car coming fast....	likely and catastrophic!	might be late for work, but I'll be safe!	....wait until car passes!
Decision: Decide to wait and cross more slowly			

Of course, in reality, the decision to wait until the car has passed before crossing the road takes a split second and is based on experience and knowledge of road safety.

Likewise, within the museum we make risk assessment and risk management decisions about caring for the collections every day. Some of these decisions will be guided by established procedures, but many simple decisions, for example about handling and moving objects will be guided by individual experience and an instant judgement.

Planning longer term collections care and allocating budgets for maximum benefit requires a more systematic approach to assessing and managing risk and needs risk assessment decisions to be recorded and collated so they can be analysed and referred to during the process and at a later date.



# Step 1

## Identifying potential threats

The first step in a risk assessment is to identify and list the potential threats to your collection. This may vary from building to building and possibly from room to room.

Risk assessment may be carried out on a whole building, a specific store or display area, or on a particular object or group of objects, depending on need, and each assessment will be different.

### Some threats to collections you may identify

- Physical forces - earthquake, high winds, landslide
- Fire - fire in adjacent property, electrical fault, lightning
- Water - flood, roof leaks, rising damp, plumbing faults
- Criminals - major theft, vandalism, staff embezzlement
- Pests - infestation of rodents or insects
- Light and radiation - exposure to light (lux & UV)
- Incorrect temperature - higher than ideal
- Incorrect relative humidity - higher, or lower, than ideal
- Custodial neglect - loss of data, poor handling and storage
- Pollutants - from disasters, incorrect cleaning materials, off-gassing from wood or MDF display or storage materials, acidic packing materials

# Step 2



Each of the identified threats can be given a risk type number depending on how frequently they are likely to occur and the severity of their effect on the collections. This risk number allows for quick reference when assessing risk in step 3.

Identification of these risk types will also be of use in emergency planning as well as on going collections care planning.

	constant	sporadic	rare
catastrophic			1
severe		2	
gradual or mild	3		



## **Type 1 risk (catastrophic and rare)**

The UK is on high alert following a series of terrorist incidents. Our museum has close links with the military and may be targeted.

Our museum was badly damaged by hurricane winds in 1987, when a tree came through the museum roof damaging parts of the collection.

We have a distillery connected to our museum, where large amounts of alcohol are being processed and stored at any time. Fire is a possibility, but it has never happened.



## **Type 2 (severe and sporadic)**

One of our museum displays contains a Victorian rhino horn which is part of an important collection locally. The black market in rhino horn for traditional eastern medicines is increasing and our display may be at risk from theft.

The roof above the store was recovered many years ago, and the slates used are cracked in some places. There is a risk that the roof may leak onto the collections.

Some of our ceramic collections are on open display in areas where the public have access. Although the area is secure, the ceramics could be in danger of being broken.



## **Type 3 risks (mild and constant)**

Readings of lux levels from windows near a display of illustrated books are very high.

Our social history collection contains some nineteenth century hats in the stores which may have been made using mercury salts and ironing boards with asbestos components.

We have ingress of dust from the street outside our museum through the front door. It affects some objects which are displayed close to the door.



# Step 3

## Evaluating probability and impact

Next, you need to assess the probability of each threat occurring and the impact that it would have on your collection. The most accurate assessment of probability involves researching existing data about occurrences, but many museums will estimate probability, or use a combination of research and estimation.

### Researching probability

How you gauge probability will depend on which of the three risk types are associated with the threat.

### Type 1 risk (catastrophic and rare threats)

Probability of these events is hard to determine in-house, but it may be possible

This assessment grid is an example of how you may ascertain risk for each threat. If you use a table like this to get a score for each identified threat, you may then prioritise your work, starting with 'disastrous' and 'very likely' risks (ie with a score of 25). Risks identified as 'very unlikely' to occur and with 'negligible' impact (ie with a score of 1) can be left out of the planning process.

to obtain information from your insurance company.

### Type 2 risk (sporadic and severe threats)

Probability can be based on previous experience at your museum, assessing incident reports, conservation records, and institutional records.

### Type 3 risk (mild and ongoing threats)

Probability can be derived from environmental monitoring data and knowledge of the effects of environmental conditions on material types.

## Estimating probability

For museums without access to detailed past reports, condition assessments, and environmental records, assessing probability is largely guess-work, based on professional knowledge and common sense.

## Estimating Impact

Assessment of impact of risk will be based on factors such as knowledge of the collections and the museum buildings, known costs of remedial conservation, whether collections are on display or in long-term storage.

PROBABILITY

		1 very unlikely	2 unlikely	3 quite likely	4 likely	5 very likely
I M P A C T	1 negligible	1	2	3	4	5
	2 slight	2	4	6	8	10
	3 moderate	3	6	9	12	15
	4 severe	4	8	12	16	20
	5 disastrous	5	10	15	20	25



# Step 4

## Prioritising and planning to reduce or remove the risks

Once you have:

- identified potential threats
- assessed threats and given them a risk number
- evaluated probability and impact

you can prioritise your high risk rating threats and establish costed plans to reduce or mitigate the risk.

what/where is a risk?	identified threat	risk type	description of risk	risk rating
display room 1	light	2	potentially high lux levels damaging works on paper	15 – very likely, moderate
textile store	insect infestation	2	pests entering through unscreened ventilation grills	9 – quite likely, moderate
display room 1	high humidity	3	damage objects on display from fluctuating humidity levels	9 - quite likely, moderate

The risk assessment for each threat which you assess might look like this

A simple plan for mitigation or risk reduction can be added to the risk assessment table with costings to help with decision making and setting priorities.

what/where is at risk?	identified hazard	risk type	description of risk	risk rating	risk reduction or elimination	costs	responsible?
display room 1	light	3	potentially high lux levels damaging works on paper	15 - very likely, moderate	lux measurement programme, install blinds & establish procedure for managing luxlevels	£3,000	Property Manager, Conservator
textile store	insect infestation	2	pests entering through unscreened ventilation grills	9 - quite likely, moderate	apply fine mesh to ventilation grills	£50	Collections Manager
display room 1	high humidity	3	damage objects on open display from fluctuating humidity levels	9 - quite likely, moderate	install a dessicant dehumidifier	£750	Collec-tions Manager

For complex risks, or high cost projects, more in-depth assessments of the costs/benefits of mitigation action can be carried out. This might involve researching a number of risk reduction strategies, costing them, and trying to gauge their likely effectiveness before deciding on a final recommendation.

## Museums and risk assessment

A collections manager from an independent museum says:

*'We have just opened a purpose built gallery to house a large number of items from the collections. Because the gallery is linked to an existing commercial venue, and encourages a free flow of visitors through both buildings, security of the collections was an important part of the brief from the very beginning. We included risk management in the brief and appointed a risk management specialist to work with us. Because it was a high budget development the risk assessment approach was quite sophisticated, and detailed. It involved all of the staff, and the gathering of a wide range of information. Apart from an improved design to the final building, and sensible and effective allocation of budget, there were other knock on effects of the process we went through. There is now a wider understanding of risk management and how it can help us to reduce risk in a planned way, and make our budget go further. Also we learned that the process is about the participation of all staff – views about security risks came from all parts of the organisation – it was about everybody working together. One outcome that we didn't anticipate was a raised profile of the value and status of the museum collections with the venue, and as a result both organisations are working together to generate new visitors.'*

A curator from an independent museum says:

*'When it came to spending to the budget we felt that we were being quite reactive, and spending money when we hit problems rather than trying to prevent the problems in the first place. We decided to start with a display area of around 15 cases and we carried out a risk assessment. We have been monitoring the light levels in the gallery for around a year – so we had some data to help us. We identified threats from light and UV radiation, water pipes, dust and theft. We have been able to carry out some very minor and inexpensive measures which lessen the risk – things like doormats, and keeping a particular door locked. In the longer term we are now planning to spend some of next year's budget on installing blinds on windows on one side of the gallery which is in full sun for a major part of the day.'*

A curator from a local authority museum says:

*'We always carry out a full risk assessment for objects going on out on loan, to determine the risk during transport and during display at the borrowing museum. This informs the levels of insurance that we need to agree in the loans agreement, and also things like the way we pack and transport objects. The condition assessment is an important part of the whole process and informs the risk assessment'*



# Where can I find out more?

## More about risk management and museum collections

***Insuring Museum Collections: a Collections Care How To Guide***, (2011), Collections Trust  
[http://www.sharemuseumseast.org.uk/shares/resource\\_121.pdf](http://www.sharemuseumseast.org.uk/shares/resource_121.pdf)

***Risk Management and Disaster Planning for Museums***, (undated), S-Tech insurance Services Ltd.  
<http://www.collectionslink.org.uk/discover/site-information/890-s-tech-guide-to-risk-management-for-museums>

***Policy for the management of risk to and from objects***, (2003), Royal Air Force Museum  
<http://www.rafmuseum.org.uk/cosford/policy-performance/collections.cfm>

***National Parks Museum Handbook, Part I, Chapter 9: Museum Collections Security and Fire Protection*** (2002), National Parks Service  
<http://www.nps.gov/museum/publications/MHI/Chapter%209.pdf>

