THE NATIONAL GALLERY

PREVENTIVE CONSERVATION RISK MANAGEMENT STATEMENT

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www.nationalgallery.org.uk

PREVENTIVE CONSERVATION October 2011

Policy owner: Director of Science

Introduction

The Board of Trustees of the National Gallery has a primary statutory responsibility to 'care for [and] preserve … the works of art … in their collection' (Museums and Galleries Act 1992 2 (1) (a)).

This is achieved in part by providing a safe and appropriate environment for the collection and by applying the principles of what is known generally as preventive conservation.

Risks

The risks of not applying a preventive conservation strategy are:

- Damage to paintings;
- Breach of statutory responsibility to care for and preserve the Collection;
- Reputational impact of failure to properly care for the Collection.

Policies/procedures

1. The principle of preventive conservation for Old Master paintings is to specify the appropriate Gallery environment for preservation and actively manage this environment to meet the specification. The factors which the Gallery aims to control are:

    - light levels and cumulative light exposure
    - ultraviolet light exposure
    - internal climate (relative humidity and temperature)
    - levels of atmospheric pollution and other pollutants
    - pest presence and activity
    - mechanical shock and vibration for pictures on display and travelling on loan

2. Specification of the environment and assessment of its safety for the collection rests on research on these risk factors. The effects of certain factors on paintings, particularly light exposure, are better understood and documented than others, for example atmospheric pollution. It is possible, also, that environmental factors act on paintings in synergy.

3. All these environmental factors are the subject of continuing research by the Scientific Department (in collaboration with other Gallery departments) with the aim of understanding better their effects on paintings and with the policy of continuing to refine environmental specification for the collection. The long-term strategy is to improve preservation standards for the collection.

4. The Gallery's policy is to:

- control all environmental factors that have been proved to damage paintings, or are suspected of causing damage.
- continue research to discover the nature and severity of these effects.
- refine environmental specification for display of the collection.
- control the environment to meet the specification and monitor and archive the results.

5. In summary, the key damaging effects are:

- **Light:** causes fading of certain pigments, darkening and other tonal and colour changes, including darkening of oil media and of picture varnishes. For fading, the effect is dependent both on absolute light level and length of exposure (the reciprocity law). Ultraviolet light is more damaging, generally, than visible light and should be excluded rigorously.

- **RH and Temperature:** stability in relative humidity and temperature are the most important conditions for pictures, although extremes of either are damaging. Wood panels are more vulnerable to fluctuating relative humidity due to their greater propensity for movement.

- **Pollutants:** There are two principal types of common air pollutants, other than particulates – acidic (SO_2 and NO_x) and oxidising (ozone). Tests on paint samples suggest these factors may be damaging; it is not yet established to what degree. Temporary sources of 'volatile organic compounds' from building works, building maintenance, cleaning and from Gallery installations, are also assessed on a case by case basis, but not measured or monitored. Measures are taken to reduce chloride-bearing salt pollution in the Galleries during the winter arising from external gritting and de-icing operations. Chloride ion is implicated in the discoloration of certain paints.

- **Pests and moulds**: There are several species of moth and beetle which can cause damage to paintings, frames and archival material. Monitoring using small traps set up in the Gallery rooms, archives and other areas is undertaken to assess the need for control measures. Mould outbreaks in the Gallery are controlled by inspection of relevant spaces and appropriate environmental measures.

Responsibilities

The Director of Science is responsible for directing research into the nature and severity of environmental factors on the condition of paintings and for recommending refinements to the controlled environment in consultation with the Director of Conservation.

The Head of Technical Services is responsible for monitoring and controlling the environmental conditions in the Gallery.