

THE NATIONAL GALLERY

PREVENTIVE CONSERVATION

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Policies/procedures

1. A primary responsibility of the National Gallery, stated in the 'Corporate Plan' is: 'to keep the pictures safe for future generations'. 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'.
2. 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
 - microclimate (temperature and relative humidity)
 - levels of atmospheric pollution
 - shock and vibration for pictures on display and travelling on loan
3. 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.
4. 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.
5. 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.
6. 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.
 - **Temperature and RH:** stability in temperature and relative humidity is the most important condition for pictures, although extremes of either are damaging. Wood panels are more vulnerable to fluctuating relative humidity due to their 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.