THE UNIVERSITY OF MELBOURNE

Grimwade Centre for Cultural Materials Conservation

DUST AND POLLUTANTS

Solid, airborne contaminants, commonly referred to as particulate matter, pose risks to the preservation of cultural collections. Particulate matter in the outdoor environment can contain dust, soot from burning fuel, sulphur dioxide or chlorides. Particulate matter can also form from the materials used to store and display collection items. Once in the environment, particulate matter can impact objects.

Dust and pollutants can cause considerable damage if left unmanaged. Therefore, keeping collection items free from dust and buffered from the environment is important.

Particles that sit on the surface are referred to as dust. Dust can come from both the external and internal environments. Inside, dust can be generated from air-conditioning units, storage containers or shelves, display cabinets, and the people within.

DAMAGE CAUSED BY DUST

Damage caused by dust and other types of particles include:

- Abrasion/scratches from dust/grit particles.
- Attracts pests - insects typically attack organic materials such as paper and textiles.
- Holds moisture - moisture attracted to surface dirt can result in localised spot corrosion of metals or mould growth.
- Dust particles which contain chlorides can cause bronze disease on metal objects.
- Staining on porous surfaces like paper or textiles.
- Discolour some dyes and pigments.
- Degrade alkaline-sensitive materials such as silks and photographs.

RESOURCES

reCollections
Caring for Collections Across Australia – Handling, Transportation, Storage and Display, Heritage Collections Council, available online: http://go.unimelb.edu.au/36wi

Agent of deterioration: Pollutants, Canadian Conservation Institute Notes, available online: http://go.unimelb.edu.au/7mwi

Blades, N, Cassar, M, Oreszczyn, T & Croxford, B 2000 'Preventive conservation strategies for sustainable urban pollution control in museums', in *Tradition and Innovation: Advances in Conservation,* Preprints from the Melbourne IIC Congress, Melbourne, Australia, May 10-14, 2000, International Institute for Conservation of Historic and Artistic Works, London, pp. 24-28. Available online through institutional or member login: http://go.unimelb.edu.au/9mwi

Grzywacz, C. 2006 *Monitoring for Gaseous Pollutants in Museum Environments,* The Getty Conservation Institute, Los Angeles, available online: http://go.unimelb.edu.au/3mwi

TIPS ON HOW TO MANAGE DUST

- Regular cleaning of storage and exhibition areas reduces dust. (NOTE: cleaning of collection items should be undertaken by a trained professional, typically a conservator).
- Regular servicing of air conditioning units, as well as door and window seals helps reduce particulate matter within the environment.
- Keeps doors and windows closed.
- Objects can be protected by using storage boxes/cupboards/drawers, dust jackets, plastic sleeves, and glazed frames.
- Use storage and display materials that are inert and will not release harmful vapours or chemicals, which can damage collection materials (see *MATERIALS FOR STORAGE* Fact Sheet).
- Keep "dirty" activities, such as cutting/sanding wood, MDF, cement – separate from collection storage and display areas.
- Keep tearooms and lunch areas separate from collection storage and display areas.

SUMMARY

Knowing and managing your environment effectively can be an easy way to protect your collection from unwanted damage. Remember to check regularly for dust and evidence of contaminants within the storage and display areas. Seek professional advice if collection material requires cleaning.