Deep Cleaning and Safe Cleaning for historic surfaces for Covid -19

Aims and Objectives

PART 1
• Define what is meant by a deep clean?
• What are the benefits?
• How does it link to benchmarking?
• Materials and equipment
• Scheduling

PART 2
• Cleaning during Covid-19
• Risk Assessments
• Managing risks to historic surfaces
• Protections and avoiding contamination
• Materials and equipment

What is deep cleaning?
• A more thorough clean where all surfaces can be inspected and cleaned if appropriate
• Where special equipment such as access tools like ladders are used
• Where extra cleaning tasks may be carried out that are not part of the normal routine
• Inventory and condition checks can be carried out at the same time

Benefits of deep cleaning
• Monitor dust levels and assess if cleaning measures are sufficient
• Condition check
• Assess impact of events or changes to the organisation
• Assess risks to the collection from the other agents of deterioration
• Great opportunity to understand what is happening in your organisation
• You can also use this as a chance to have chimneys swept or other external tasks carried out

It is vital to keep and refer to records!

Considerations
• The safety of the staff and visitors are paramount
• Check your organisations existing Risk Assessments and latest government guidelines, is it safe to carry out this work?
• Is there a risk of spreading contamination?
• Can work be carried out safely?
• The virus can persist for 168 hours on some surfaces
• Communication is key, ensure all staff and volunteers know what is happening to reduce risks
• If you are unclear about whether it is safe to proceed do not carry out the work and seek further guidance

Introductions
Sophia Delman – Preventive Conservator, Spencer & Fry
https://www.spencerandfry.co.uk/
For conservation advice – info@spencerandfry.co.uk
You can also find us here: https://southeastmuseums.org/support/conservation/
With lots of helpful conservation advice
Second Wave lockdown

- Protecting objects from the 10 agents of deterioration
- Protecting historic interiors
- Protecting the building
- Preparing for potential incidents

Dust

- Could be a problem at this time of year in particular
- Thrives at high humidity, over 70% RH but can grow at RH of 60%
- Dark spaces with little air movement
- Will grow on a wide range of materials
- Very damaging to surfaces
- Serious health hazard
- You must wear PPE, FFP2 mask, nitrile gloves and a Tyvek suit
- Isolate the objects or area
- Use a dehumidifier
- If possible keep RH <65% and temperature <10°C
- Ask a conservator to advise and treat objects

Mould

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- Thrives at high humidity, over 70% RH but can grow at RH of 60%
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**Museum Pests**

Why do pests come inside?
- Looking for somewhere dark and safe to lay their eggs
- To hibernate over the winter
- Food sources
- Accidentally

How do they get in?
- Gaps in the fabric of the building
- Chimneys
- Open doors / windows
- People
- New acquisitions
- Returned loans
- Deliveries


**Insect Pests Case-bearing Clothes Moth (Tinea pellionella)**

**Non-pest Insects**

Black ground beetles, Ants, Ladybirds, Spiders, Cluster Flies
- Good indicators of where insect pests can be entering your building / display area
- Food source for other pests

Fungus / plaster beetles, Woodlice, Silverfish
- Good indicator of dampness

**Non-Insect Pests**

**Benchmarks**

- Benchmarks in Collection Care 2.1 is published by the MLA and Collections Trust and is a self-assessment tool which provides a framework for assessing and improving conservation, preservation and management in Collections
- Benchmarks in Collection Care 3.0 is currently being developed
- Both are tools for assessing the quality of your organisation’s conservation management and forms part of the wider framework for managing collections that is expected of organisations seeking Accreditation
Benchmarks

- Carrying out a deep cleaning can fit with benchmarking and can be a good opportunity to use this tool.
- There are specific benchmarks concerning housekeeping which apply directly to a deep clean; Section 4, point 2, object handling 5.4 and 5.5, Labelling and Marking, Handling and Moving Procedures, Airborne Pollution: Gaseous and Particulate 6.9, Implementation of a Conservation Programme 8.4, Implementation of a Conservation Programme 8.11.

Materials and Equipment

- Make sure you and your colleagues have read and understood the relevant risk assessments and have had training in how to use equipment safely, it may not be possible to carry out some tasks where colleagues cannot remain physically distant.
- Make sure you have all your equipment prepared before you start, including PAT tests for electrical equipment and external safety checks for ladders and scaffolding.
- Make sure you have a method statement or plan for the entire process and that this has been communicated to all relevant staff and volunteers.

Dry cleaning – vacuum cleaners with different attachments, nozzles and nylon mesh.

- A range of brushes, coarse and soft, banister brushes, padded with plastazote if needed, microfibre cloths.
- Extension cables and lights.
- Padded tables, boxes, cushions or pads, foam blocks.
- Access equipment, ladders, tele towers and scaffolding.
- Wet cleaning, only if advised by a conservator – cloths, non-ionic surfactant, deionised water in secure containers, buckets or different colours, one for surfactant water and one for rinsing, blotting or drying materials.
- Pencils, paper, cameras for recording work or discoveries.

Vacuuming

- The spread of SARS-Cov-2 risk from vacuuming is unknown.
- Use a vacuum with a HEPA filter.
- Vacuum when the room is empty.
- Consider quarantining the room for 72 hours.
- If there has been a known case of COVID-19 then the process should be reassessed.
- The vacuum will need to be disinfected or quarantined and the hoover bag safely disposed of.

After cleaning

- Waste will need to be safely disposed of and equipment will need to be cleaned or quarantined according to Covid-19 safety guidance.
- Waste can be sealed and quarantined before disposal if required and providing it is not a fire hazard.
- Equipment can be wiped down with disposable handwipes, clothes can be machine washed, brushes should be quarantined for 72 hours and then washed with non-ionic surfactant such as Surfcare or Boots sensitive skin.

Government guidance for laundry

- Wash items in accordance with the manufacturer’s instructions. Use the warmest water setting and dry items completely. Dirty laundry that has been in contact with an unwell person can be washed with other people’s items. To minimise the possibility of dispersing virus through the air, do not shake dirty laundry prior to washing.
- Clean and disinfect anything used for transporting laundry with your usual products, in line with the cleaning guidance above.

Scheduling Cleaning

• It is vitally important to schedule cleaning based on the significance and stability of your collections and historic interiors.
• Schedules will need to be flexible around other events such as building works or Covid-19.
• Record keeping and photographs will be very important.
• Cleaning schedules that are up to date can be used for benchmarking.

COVID-19

The disease COVID-19 is caused by the SARS-CoV-2 virus.

SARS-CoV-2 – strain of coronavirus
Coronavirus – a group of viruses that cause diseases in mammals and birds (in humans; respiratory tract infections)
(The name “coronavirus” is derived from Latin corona, meaning “crown” or “wreath”)

We are still finding things out about the SARS-CoV-2 virus, but can look at data for similar viruses. Lots of research is currently underway and as we find out more we will need to evolve our plans to deal with this virus.

Virus – RNA (genetic code) surrounded by fat based envelope.

Risk Assessments - Cleaning Collections after lockdown

• SENDP Advice on Reopening Museums – Reopening Museums Toolkit
  https://southeastmuseums.org/resource-library/advice-on-reopening-museums-reopening-museums-toolkit/
• Icon ‘Waking Up’ Collections: A Post-lockdown Guide
• Your own organisation’s Risk Assessment and Method Statement

Cleaning collections during COVID-19

• The safety of staff, volunteers and visitors comes first.
• Refer to your own Risk Assessments and the latest Government/PHE guidance
  https://www.gov.uk/guidance/working-safely-during-coronavirus-covid-19/heritage-locations#heritage-5.5
• 5.5 Heritage considerations for all locations

• It is especially important that the cleaning and disinfecting procedures and regimes for historic buildings and objects are given careful consideration. For instance, some areas, like shelves or display cases, might be better cleaned, disinfected or treated with non-chemical protective methods (and their removal) in order to prevent damage to the artefacts. Disinfecting procedures, for example, fogging/spraying/disinfection should not be used in areas with historic objects.
• It is also particularly important that Historic England’s specific advice on cleaning and disinfecting historic buildings is taken into account.

Disinfecting – proceed with caution!

THESE CAN ALL DAMAGE HISTORIC MATERIALS AND SURFACES!

• To deactivate the virus bleach (sodium hypochlorite), hydrogen peroxide, alcohols (over 70%) and quaternary ammonium compounds are found in most commercial disinfectants.
• Fogging/spraying/electrostatic/discharging should not be used in areas with historic objects or interiors. It cannot be guaranteed that the disinfectant will not reach historic surfaces and enter display cases. It is still unknown how some of the chemicals will react with different historic materials.
• UV should not be used as it is know that UV light will damage historic surfaces and objects, it is also harmful to skin and eyes.
Historic England Guidance

- Historic England has produced guidance about which cleaning materials are safe to use on different historic surfaces as well as the length of time the virus can survive on the surfaces.
- If in doubt consult a conservator.
- Incorrect cleaning can cause permanent and ongoing damage such as corrosion, cracking and loss.
- [link to guidance]

Quarantine - Preferable

- Quarantine could be the best option, rather than disinfecting.
- It may reduce the risk to people.
- It will reduce the risk of damage to historic surfaces.
- Signage and barriers will be essential.
- Check on the Historic England website for the virus can persist on some materials such as plastics for 168 hours.

Reducing contamination - Preferable

- Consider if disinfecting is required – virus deactivates and will no longer be viable after several days – “normal” cleaning can be carried out.
- Use of barriers / stanchions to keep people at an appropriate distance.
- Reduce touch points – keep doors open (if not fire doors or should be kept shut for environmental control).
- Wear gloves and covers – ‘do not touch’
- Provide gloves/ shoe covers.
- Consider covering historic objects, fixtures, fittings and floors.

Cleaning materials

- Really important to understand the cleaning materials you are using, check their ingredients and their COSHH requirements and MSDS – Material Safety Data Sheet.
- Only make up small quantities of cleaning materials.
- Make sure you can store and dispose of them safely.
- Is there another option?
- Consider the contact time required to deactivate the virus – is the substrate robust enough to withstand this?

Surfactants

- The fat based envelope can also be broken down by surfactants (disclaimer). A sensitive skin washing-up liquid (SurCare/ Boots sensitive skin) can be used to clean historic wood, stone, glass, ceramic and modern painted surfaces.
- BUT – surfaces have to be able withstand being wet. If in doubt test first or just don’t clean it.
- Make a solution in a spray bottle.
- Have a second spray bottle with deionised water.
- Spray onto (soft) paper towel.
- Wipe (need to consider contact time).
- Rinse with a wipe lightly dampened with the deionised water spray.

- They need to be 70% concentrations in purified water
- They need to be in contact with surface for at least 2 minutes
- Industrial alcohols can be difficult to buy and transport. You will need to register with HMRC.
- Methylated spirits bought from DIY stores are not generally suitable for treating historic surfaces because they usually include harmful additives and dyes that could stain historic surfaces.
- Isopropanol is readily available at 70% and can also be purchased as impregnated wipes. Always read the product labelling or MSDS to check that isopropanol and deionised water are the only ingredients.
- These chemicals are flammable so they need appropriate storage and safety measures.
- Metals without a finish can be wiped with 70% alcohol.

Alcohols

Peroxygen compounds

- Example: hydrogen peroxide
- Peroxygen compounds such as hydrogen peroxide can break down the virus’ essential components, but are powerful oxidising agents and can also damage historic surfaces.
- Peroxygen compound-based proprietary disinfectants are available. Always read the product labelling or MSDS to check that the peroxygen compound percentage doesn’t exceed 0.7% (7,000 ppm).
- Concentration and minimum effective contact time:
  - 0.7% (7,000 ppm): 2 minutes
- These compounds can cause damage to many historic surfaces so check with a conservator before using.

Equipment

- Cleaning equipment:
  - Small containers, spray bottles
  - Isopropyl wipes
  - Appropriate PPE for the task
  - Cotton wool swabs
  - Microfibre cloths
  - Brushes
  - It is suggested that gloves are worn to prevent contamination of equipment.
- Protective Materials for objects:
  - Correx
  - Plastazote
  - Foam noodles
  - Tyvek
  - Acid free tissue
  - Cling film
  - Signage for quarantine

Equipment will need to be cleaned and waste disposed of safely and appropriately. Follow the guidance on the method safety data sheet and manufacturer’s instructions. Equipment should be labelled and quarantined.

Summary

Deep cleaning
- Great opportunity to remove dust from furniture
- Assess and condition check collections and historic interiors
- Benchmarking activities can be fitted into this
- Have correct risk assessments
- Have correct equipment and do not be tempted to over clean
- Communication is key

Safe Cleaning of Historic Surfaces
- Preventing contamination and quarantining are lower risk than disinfecting!
- Risk assessments need to be written and applied
- There are many techniques that can damage collections and interiors such as fogging, UV light or Ozone.
- It is vital to understand the material you wish to clean and how it will react to cleaning agents before you begin.
- You must follow COSHH guidelines for all cleaning materials.
- Includes how equipment and materials will be cleaned in your risk assessment.
- Communication is key

Thank you