



Museum and preventive conservation

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Abstract:-

Museum and preventive conservation have a significant role in order to safeguard the museum collection. This paper ponders upon museums and the role of preventive conservation in museums. The paper highlighted the cause of deterioration in the museum and ways and measures to safeguard or protect from future damage to the museum collection. The paper would cater to the student of museology in terms of museums and their relation with preventive conservation and how preventive could perform or implement in museums.

Keywords: - *Museum collection, Museum, Conservation, preventive conservation, and deterioration.*

Introduction

The museum is the place where the collection of valuable objects is stored, cared for their uncertain life or conducted conservation and displayed to the public to educate them about past cultural heritage. “A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.” (ICOM, 2022.) Preventive conservation is a very primary strategic step in the conservation of the museum’s collection. All museums should care and conserve their museum’s collections which would be performed by the museum that is preventive conservation.

Conservation - all measures and actions aimed at safeguarding tangible cultural heritage while ensuring its accessibility to present and future generations. Conservation embraces preventive conservation, remedial conservation, and restoration. All measures and actions should respect the significance and the physical properties of the cultural heritage item. (ICOM-CC, 2008.)

Preventive conservation - all measures and action targets to turn aside and minimize future deterioration or damage. They are carried out within the context or on the surroundings of an item, but more often a group of items, whatever their age and condition. These measures and actions are indirect – they do not interfere with the materials and structures of the items. They do not modify their appearance. (ICOM-CC, 2008.)

Remedial conservation - all actions directly applied to an item or a group of items aimed at arresting current damaging processes or reinforcing their structure. These actions are only carried out when the items are in such a fragile condition or deteriorating at such a rate, that they could be lost in a relatively short time. These actions sometimes modify the appearance of the items. (ICOM-CC, 2008.)

Restoration – all actions directly applied to a single and stable item aimed at facilitating its appreciation, understanding, and use. These actions are only carried out when the item has lost part of its significance or function through past alteration or deterioration. They are based on respect for the original material. Most often such actions modify the appearance of the item. (ICOM-CC, 2008.)

Conservation measures and actions can sometimes serve more than one aim. For instance, varnish removal can be both restoration as well as remedial conservation. The application of protective coatings can be both restoration and preventive conservation. Reburial of mosaics can be both preventive as well as remedial conservation.

Museum collection and its cause of deterioration

The museum collection carries certain causes of deterioration that should be managed and maintained by preventive conservation. So before understanding the cause of the deterioration of the museum collection; will discuss what is museum collection and deterioration. Museum collection - Museum Collection shall include all artefacts, including heritage buildings, and archival materials, owned by the Town, or owned by the Foundation and loaned to the Town pursuant to this Memorandum of Understanding and Deterioration defines that the action or process of becoming impaired or inferior in quality, functioning, or condition. For instance, the state of having deteriorated rust *deterioration and the deterioration* of academic standards. Here are some causes of the deterioration of the museum collection. (Art Council England, SEM.)

Light - Light causes permanent photochemical changes, and loss of strength in the material structure will cause them to be brittle and possibly difficult to handle. • The main cause of damage from light is UV radiation. • Light also causes dyes to fade – blue and red are particularly susceptible. • Suitable light levels are 50 lux for light-sensitive objects (including watercolours, leather, textiles, paper, and lacquered furniture) and max 250 lux for less light-sensitive materials (including metals, glass, ceramics). • Light protection can include the use of blinds, UV film, covering objects when the museum is not open, and moving items that are regularly in direct sunlight.

Pests - This includes insects, fungi, and mould. • Can be an H&S issue for people but can also weaken the structural integrity of the object. • Insects like to live in warm damp places, and mould flourishes about 70% RH. Therefore we try and keep RH in a museum between 45- 65%. • Pests should be checked regularly with the aid of pest traps and visual inspection of the collection. Some insects can be attracted to pheromones, such as moths. • If mould occurs on an object it can damage the surface so should be removed using the appropriate PPE. A professional conservator should be consulted. • Prevention for pests includes good housekeeping (so the insects do not have anything to feed on), keeping the RH and temperature at an appropriate level, keeping doors and windows closed, regular monitoring so an outbreak is discovered quickly, and quarantining new objects coming into the museum to ensure they are not infested with insects, fungi or mould. • Prevention for mould and fungi include keeping the RH levels steady and below 70%, quarantining any new objects that come into the museum, and ensuring there is enough ventilation so microclimates are not being made (such as in the drawers of a dresser.)

Pollutants - Dust is one of the major pollutants and is hygroscopic which means it attracts water to the surface of the object and can become ingrained into the surface. • Dust can cause corrosion on metals by attracting water to the surface. • Other pollutants include sulphur dioxide (mainly from fuel in cars), ozone (can come from items such as photocopiers), and volatile organic compounds (can come from some paints and wood). These can all cause the tarnishing of metals, degradation of textile fabrics, and cause paper to go brittle. • Prevention against dust includes good housekeeping, easy-to-clean spaces, ensuring there are good door mats at the front door, and ensuring that open displays are far enough away from the visitor route and the cabinets are well sealed. • Prevention against other airborne pollutants includes good filters on any air condition system, not having electrical equipment in your storage areas, keeping doors and windows closed, and making sure cabinets and mounting materials inside are conservation grade and will not off-gas, causing harm to the collection.

Incorrect Temperature and Relative Humidity - Temperature and relative humidity are linked - generally, as the temperature goes up the relative humidity comes down. • Incorrect RH can cause shrinking and cracking/swelling which means adhesives fail, textile fibres lose their flexibility and break, and wooden items especially can be permanently damaged. • Fluctuating RH can cause the most damage as it causes an object to swell and shrink over a short time frame. • Both should be monitored regularly – a minimum of once a day if taking spot readings and if continuously monitoring with an electronic system the information should be downloaded a minimum of once a month. • The temperature and relative humidity can be kept stable using oil-filled radiators, fans, and air conditioning units which can be connected to humidistats.

Physical Damage - Major contributors to physical damage are accidents and wear and tear. • This is why we try not to handle objects too much and ensure they are handled in the correct way. • Using incorrect cleaning methods and materials can be very destructive over time and cause accumulative damage (wear and tear). • What we wear that could cause damage to an object when handling / cleaning: zips, name badges, keys,

jewellery, nail varnish, and long hair. • Always allow enough time and enough people when moving objects. • Think about the object and what support it needs when being handled or packed – never lift anything by the handle.

Chemical - Perspiration is mildly acidic, becoming alkaline as it ages. This is especially bad for costumes and metals as it corrodes the surface. • Always wear gloves when handling metals. • Important to use acid-free materials in packing so it does not affect the object. Also important to change the packing materials from time to time as they absorb any acidity given off by the object.

Loss - Be aware of your surroundings and where you are moving objects to and from. • Always think about security when you are moving objects and do not leave my unattended in a non-secure space. • Always document if you move objects around. • Be familiar with your evacuation policy and emergency salvage plans. • Know your stored / important items.

Role of preventive conservation in museum

Preventive conservation is the most significant part of the museum, which protects and stops future damage to the museum's collection, the collection is the brain of the museum whereas preventive conservation is the body part of the museum which supports the museum collection to display, exhibit, educate, promote educational activities in the museum as well as provide an understanding to visitor and public that how to protect the cultural heritage properties and collections of the cultural valuable artefact of past and educate present generation or preserve past information for the upcoming or future generation. Preventive conservation deals with several collections of the museum for instance: the organic collection (paper, textile, wood, and so on.) Inorganic collection (metal, brass, iron, and so on.) is preventive conservation and the museum has a significant role to regulate the museum functions.

Conclusion and discussion

The museum and preventive conservation have a too significant role in safeguarding the cultural collection in the museum. The museum is the custodian of the collection with cultural value; the museum should follow and implement preventive conservation in regional museums so that museums are able to enhance their collection's life span and transfer to future generations.

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