



Anant Sinha  
Administrator  
The Asiatic Society, Kolkata  
[anantsinha21@gmail.com](mailto:anantsinha21@gmail.com)

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## Preventive Conservation of Heritage Buildings in India

Anant Sinha

### Abstract:

*Preventive conservation of heritage building is one of the most important tools to maintain as well as preserve a Heritage structure. The best part of preventive conservation is that it very simple in execution and financially viable. If preventive conservation is implemented properly, it increases the life span of heritage structure and enhances the aesthetics of the place. Key focus areas in preventive conservation are its periodicity and methods.*

**Key words:** Preventive, conservation, heritage, periodic, challenges, aesthetics,

**Abbreviations:** *Gol* - Government of India, *ASI*- Archeological Survey of India.

### 1. Introduction:

Indian sub-continent civilization has been flourishing since Indus valley, may be more than that, it is still a subject of discussion and argument<sup>1</sup>. However, the mastery of building houses, civic amenities, beautiful caves, temples, roads, canals, palaces, dockyards etc. since ancient time has been demonstrated. To name a few:

- Town planning of Mohenjo-daro<sup>2</sup>.
- Urban sanitation system of Indus valley civilization<sup>3</sup>.
- Dockyard of Lothal<sup>4</sup>.
- Granary and step well<sup>5</sup>.
- Brihadisvara Temple at Thanjavur, Tamil Nadu<sup>6</sup>.

The Urban architecture and different types of buildings in ancient mediaeval and modern India Has evolved over a period of time. It also reflects the engineering marvel of our ancestors in creating scientific and sustainable infrastructure. Preventive conservation of buildings in India has been a part of practice since time immemorial. Construction of houses, palaces, temples canal, bridges, step well, beautiful caves, pillars have been in existence since ancient time.

<sup>1</sup> Allchin, Raymond (1982). *The Rise of Civilization in India and Pakistan*. Cambridge University Press. [ISBN 9780521285506](#).

<sup>2</sup> ibid

<sup>3</sup> ibid

<sup>4</sup> ibid

<sup>5</sup> ibid

<sup>6</sup> Burton Stein (1978). *South Indian Temples*. Vikas. [ISBN 978-0706904499](#).



Various rulers in different time period have taken interest to develop and maintain beautiful buildings which are now known for its remarkable architecture as well as engineering.

However, Heritage Building faces increasing threats from environmental degradation urbanization, climate change and neglect. Preventive conservation is a proactive method by which the life of heritage building gets longer and it also helps maintain aesthetic look of the heritage building. Preventive conservation is an economical way to preserve the original architecture as far as possible within the limited means.

## 2. Existing Guidelines, Acts and Procedure regarding Heritage and Conservation:

### 2.1 What is a Heritage Building:

As per the definition of Ministry of Housing and Urban Affairs Government of India “Heritage building” means and includes any building of one or more premises or any part thereof and/or structure and/or artifact which requires conservation and / or preservation for historical and / or architectural and / or artisanry and /or aesthetic and/or cultural and/or environmental and/or ecological purpose and includes such portion of land adjoining such building or part thereof as may be required for fencing or covering or in any manner preserving the historical and/or architectural and/or aesthetic and/or cultural value of such building<sup>7</sup>.

### 2.2 What is Preventive Conservation:

Preventive conservation - all measures and actions aimed at avoiding and minimizing future deterioration or loss. 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.

The Resolution adopted by the ICOM-CC membership at the 15th Triennial Conference, New Delhi, 22-26 September 2008<sup>8</sup> was that-

*“Examples of preventive conservation are appropriate measures and actions for registration, storage, handling, packing and transportation, security, environmental management (light,*

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<sup>7</sup> Chapter-8 Conservation of Heritage Sites Including Heritage Buildings, Heritage Precincts And Natural Feature Areas, Mouha, GoI <https://mohua.gov.in/upload/uploadfiles/files/Chap-8.pdf>

<sup>8</sup> Resolution adopted by the ICOM-CC membership at the 15th Triennial Conference, New Delhi, 22-26 September 2008  
[https://www.iccom.org/sites/default/files/2022-02/icom\\_cc\\_resolution\\_on\\_terminology\\_english.pdf](https://www.iccom.org/sites/default/files/2022-02/icom_cc_resolution_on_terminology_english.pdf)

humidity, pollution and pest control), emergency planning, education of staff, public awareness, legal compliance”.

## 2.3 How, What and Who decides about a Heritage Buildings?

### 2.3.1 For World Heritage Sites:

UNESCO, which stands for the United Nations Educational, Scientific and Cultural Organization, works to protect and preserve important cultural and natural heritage around the world. To help with this, UNESCO’s member countries adopted the World Heritage Convention in 1972. This agreement explains what countries need to do to find and take care of special sites that can be added to the World Heritage List.

India became part of this Convention in November 1977. Today, the World Heritage List includes 1,223 sites that are considered valuable to all of humanity. These include 952 cultural sites, 231 natural sites, and 40 sites that have both cultural and natural importance (Diagram-1). As of October 2024, 196 countries have joined the World Heritage Convention.

World Heritage Sites: Protecting Future<sup>9</sup>



Diagramme-1: World Heritage List

<https://pib.gov.in/PressReleasePage.aspx?PRID=212223>



Diagramme-2: India on the World Heritage Map

<https://pib.gov.in/PressReleasePage.aspx?PRID=2122423>

World Heritage Sites are special places on Earth that have great value for all of humanity. These can be cultural, natural, or a mix of both. They are protected under an international agreement

<sup>9</sup><https://pib.gov.in/PressReleasePage.aspx?PRID=2122423>



led by UNESCO. UNESCO gives the World Heritage title to places that are culturally, historically or scientifically important<sup>10</sup>.

Over the years, India has steadily expanded its presence on the World Heritage List. In July 2024, a proud addition was made with the inscription of “Moi dams: The Mound-Burial System of the Ahom Dynasty” from Assam as a cultural property. With this, India now has 43 sites on the World Heritage List and 62 more on UNESCO’s Tentative List (Diagram-2). The country’s journey began in 1983 with the listing of Agra Fort, followed by the Taj Mahal, Ajanta Caves and Ellora Caves. These sites are preserved not only as symbols of history but also as learning spaces for generations to come<sup>11</sup>.

### 2.3.2 Central Government (Union List):

The Archaeological Survey of India (ASI), under the Ministry of Culture, is the nodal agency for declaring monuments and sites of national importance through the Ancient Monuments and Archaeological Sites and Remains Act, 1958<sup>12</sup>.

### 2.3.3 State Governments (State List):

State governments also have the authority to declare buildings as heritage within their states, often through their own state-level heritage laws or regulations.

### 2.3.4 Municipal Corporations:

In some cases, municipal corporations or development authorities, often on the advice of heritage conservation committees, may declare buildings as heritage within their urban areas.

## 2.4 Grading of the Listed Buildings and Listed Precincts:<sup>13</sup>

Listed Heritage Buildings / Listed Heritage Precincts may be graded into three categories. The definition of these and basic guidelines for development permissions are as follows:

Listing does not prevent change of ownership or usage. However, change of use of such Listed Heritage Building / Listed Precincts is not permitted without the prior approval of the Heritage Conservation Committee. Use should be in harmony with the said listed heritage site.

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<sup>10</sup> ibid

<sup>11</sup> ibid

<sup>12</sup> <https://asi.nic.in/>

[https://www.indiaculture.gov.in/sites/default/files/acts\\_rules/TheAncientMonumentsandArchaeologicalSitesandRemainsAct1958\\_12.03.2018.pdf](https://www.indiaculture.gov.in/sites/default/files/acts_rules/TheAncientMonumentsandArchaeologicalSitesandRemainsAct1958_12.03.2018.pdf)

<sup>13</sup> ibid



**2.4.1 Heritage Grade-I:** It comprises buildings and precincts of national or historic importance, embodying excellence in architectural style, design, technology and material usage.

**2.4.2 Heritage Grade-II (A&B):** It comprises of buildings and precincts of regional or local importance possessing special architectural or aesthetic merit, or cultural or historical significance.

**2.4.3 Heritage Grade-III:** It comprises building and precincts of importance for townscape; that evoke architectural, aesthetic, or sociological interest through not as much as in Heritage 135 Model Building Bye-laws.

### 2.5 Conservation policy of Archaeological Survey of India:

As per National Conservation Policy 2014 (GoI)<sup>14</sup>, all natural sites shall fall within Grade-I; though of a lower scale than Heritage Grade-I. They are local landmarks, which contribute to the image and identity of the region. They may be the work of master craftsmen or may be models of proportion and ornamentation or designed to suit a particular climate. Grade-II. These contribute to determine the character of the locality and can be representative of lifestyle of a particular community or region and may also be distinguished by setting, or special character of the façade and uniformity of height, width and scale.

### 3. Objectives of the Study:

The main objectives of the present study are-

- (i) Heritage Grade-I richly deserves careful preservation.
- (ii) Heritage Grade-II deserves intelligent conservation. (though on a lesser scale than Grade-II and special protection to unique features and attributes).

### 4. Scope for Changes:

No interventions be permitted either on exterior or interior of the heritage building or natural features unless it is necessary in the interest of strengthening and prolonging the life of the buildings/or precincts or any part or features thereof. For this purpose, absolutely essential and minimum changes would be allowed and they must be in Grade-II(A): Internal changes and adaptive re-use may by and large be allowed but subject to strict scrutiny. Care would be taken to ensure the conservation of all special aspects for which it is included in Heritage Grade-II.

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<sup>14</sup> National Conservation Policy, 2011. Ministry of Culture, GoI, ASI.



**Grade-II(B):** In addition to the above, extension or additional building in the Internal changes and adaptive re-use may by and large be allowed. Changes can include extensions and additional buildings in the same plot or compound. However, any changes should be such that they are in harmony with and should be such that they do not detract from the existing heritage building/precinct. In conformity with the original, same plot or compound could in certain circumstances, be allowed provided that the extension / additional building is in harmony with (and does not detract from) the existing heritage building(s) or precincts especially in terms of height and façade.

## 5. Procedure:

Development permission for the changes would be given on the advice of the Heritage Conservation Committee.

### 5.1 Vistas / Surrounding:

All development in areas surrounding Heritage Grade-I shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-I. All development in areas surrounding Heritage Grade-II shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-II. All development in areas surrounding Heritage Grade-III shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-III.

### 5.2 Concept of Preventive Conservation:

According to Vandesande, A.; Etal. (2020)<sup>15</sup> the concept of 'Preventive Conservation' has successfully introduced the knowledge that "prevention is better than cure" into the built heritage sector. The benefits of this approach are the cost-effectiveness, the improved protection of heritage values, the reduced risk for accumulating deterioration and additional damage, the prolongation of the physical service life of buildings and building parts and the empowerment of local communities in dealing with heritage. Increasingly, arguments rise against reactive treatment patterns, which result too often in postponed interventions and increasing costs for restoration

### 5.3 Challenges of Preventive Conservation of a Heritage Building:

There are several Factors towards Preventing Conservations of the Heritage Buildings<sup>16</sup>; some of which are discussed below.

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<sup>15</sup>Aziliz Vandesande, Els Verstrynghe, Koenraad Van Balen Copyright (2020). Preventive Conservation - From Climate and Damage Monitoring to a Systemic and Integrated Approach. Proceedings of the International WTA - PRECOM3OS Symposium, April 3-5, 2019, Leuven, Belgium



### 5.3.1 Environmental Factors:

Several Environmental Factors are there; out of which a few important factors are mentioned herein.

- (i) **Climate Change:** Rising sea levels, increased rainfall, and extreme temperatures pose significant threats to heritage structures, leading to erosion, flooding, and material degradation.
- (ii) **Pollution:** Air and water pollution can accelerate the deterioration of building materials, particularly in urban areas.
- (iii) **Natural Disasters:** Earthquakes, floods, and storms can cause catastrophic damage to heritage buildings, requiring extensive and costly repairs.
- (iv) **Vandalism:** Unauthorized access and deliberate damage can lead to irreversible loss of historical fabric.

### 5.3.2 Financial Constraints:

There are several financial constraints regarding Preservations of the Heritage Buildings-

- (i) **High Costs:** Conservation work is often expensive, requiring specialized materials, skilled labor, and meticulous attention to detail.
- (ii) **Lack of Funding:** Securing adequate funding for conservation projects can be difficult, especially for privately owned or less prominent heritage sites.
- (iii) **Economic Pressures:** Balancing the need for conservation with the economic viability of heritage sites, particularly in urban areas, can be challenging.

### 5.3.3 Lack of Skilled Personnel:

There are several reasons for lack of skilled personnels towards maintaining the restoration of the Heritage Buildings.

- (i) **Heritage Skills Shortages:** There is a growing need for skilled craftspeople, conservators, and heritage professionals who can implement effective conservation strategies.
- (ii) **Lack of Training:** Inadequate training and educational programs for heritage professionals can hinder the development of expertise in preventive conservation.

### 5.3.4 Management and Planning:

Again, there are several lacunae in proper and effective management and planning towards maintenance of restoring Heritage Buildings.

- (i) **Lack of Management Plans:** Inadequate management plans and policies can lead to poor decision-making and inappropriate interventions.





- (ii) **Stakeholder Engagement:** Effective conservation requires the involvement of various stakeholders, including local communities, government agencies, and private owners.
- (iii) **Balancing Development and Conservation:** Integrating heritage conservation with urban development and tourism can be complex and require careful planning and management.

### 5.3.5 Other Challenges:

There are several other challenges too; some of the notable challenges are mentioned below-

- (i) **Documentation and Research:** Proper documentation of heritage structures and materials is essential for informed conservation decisions.
- (ii) **Use of Technology:** While technology can be a valuable tool for documentation, analysis, and monitoring, it can also pose challenges related to authenticity and accessibility.
- (iii) **Sustainability:** Ensuring the long-term sustainability of heritage sites requires a holistic approach that considers social, economic, and environmental factors.

## 6. Measures of Preventive Conservation:

Measures of Preventing Conservations include several areas are described in the Chapter-8 Conservation of Heritage Sites Including Heritage Buildings, Heritage Precincts and Natural Feature Areas<sup>17</sup>; some of which are briefly mentioned below-

- (i) Controlling temperature, relative humidity and pollutants;
- (ii) Integrated Pest Management;
- (iii) Cleaning and housekeeping;
- (iv) Emergency preparedness and response;
- (v) Handling procedures for heritage objects;
- (vi) Hazardous materials to be kept away;
- (vii) Routine Caring- Historic buildings are often considered to be difficult to manage and are expensive to maintain. In fact, by understanding the characteristics of traditional buildings, and with the right care and attention, they can last for a long time. Routine caring is the best solution to prevent building from deterioration. Three areas that need particular attention:
  - (a) Keep out of moisture;
  - (b) Prevent insect attack;
  - (c) Stop plant growth on building fabric.

Physical/ Visual inspection by owners and administrative persons can also help to identify the preventive measures required to the heritage property.

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<sup>17</sup> <https://mohua.gov.in/upload/uploadfiles/files/Chap-8.pdf>





## 7. Emergence of New Technology for monitoring the state of Heritage Building:

According to the study of S. A. Rahman; et.al. (2023)<sup>18</sup> several important findings have been revealed; some of which are given herein.

- (i) **Advanced Materials Science:** New materials and techniques are being developed for the restoration of fragile artifacts and buildings, ensuring their preservation for the future.
- (ii) **Robotics and Drones:** Robotic systems and drones can be used for on-site scanning, inspection, and even restoration work in challenging or dangerous environments.
- (iii) **Monitoring Systems:** Sensors and monitoring systems can track environmental conditions (temperature, humidity, etc.) that can affect the preservation of heritage sites and artifacts.

## 8. Source of Financial Assistance Schemes for Heritage Building Restoration:

### 8.1 Sources of Financial Assistance:

- (i) **Financial Assistance for Promotion of Art and Culture<sup>19</sup>:** The Ministry of Culture implements a central sector scheme that provides financial support to eligible cultural organizations working in the field of art and culture.
- (ii) **Financial Assistance for Preservation and Development of Cultural Heritage:** This scheme provides support for the preservation and development of cultural heritage, including heritage buildings.
- (iii) **Scheme of Financial Assistance for the Preservation and Development of Cultural Heritage of Himalayas:** This scheme specifically targets the Himalayas and provides assistance for preservation and development of cultural heritage in the region.
- (iv) **Museum Grant Scheme:** The Ministry of Culture also offers a Museum Grant Scheme for capacity building and training programs related to museum management.
- (v) **International Assistance:** Organizations can also apply for international assistance, such as from [UNESCO World Heritage Centre](https://www.unesco.org/), for projects related to world heritage sites.
- (vi) **Organizations Offering Assistance:** there are several Organizations who offers assistances-
  - (a) **Ministry of Culture<sup>20</sup>:** Implements various schemes for financial assistance to cultural organizations and projects.

<sup>18</sup> S. A. Rahman; et.al. (2023). *A Review on the Issues and Challenges of Heritage Preservation in the Industry Revolution 4.0*. International Journal of Academic Research in Business & Social Science; Vol-12. Issue-13 (2023); e-ISSN: 2222-6990. Retrieved from- [https://www.researchgate.net/publication/376502385\\_A\\_Review\\_on\\_the\\_Issues\\_and\\_Challenges\\_of\\_Heritage\\_Preservation\\_in\\_the\\_Industry\\_Revolution\\_40](https://www.researchgate.net/publication/376502385_A_Review_on_the_Issues_and_Challenges_of_Heritage_Preservation_in_the_Industry_Revolution_40)

<sup>19</sup> <https://www.pib.gov.in/PressReleasePage.aspx>

<sup>20</sup> Ministry of Culture, Govt. of India. Retrieved from- <https://www.indiaculture.gov.in/schemes/>

- (b) **UNESCO World Heritage Centre:** Provides international assistance for the conservation of world heritage sites.
- (c) **Mumbai Metropolitan Region – Heritage Conservation Society (MMR-HCS):** Offers financial assistance for the improvement of heritage precincts and the restoration of heritage objects.
- (d) **National Trust for Historic Preservation:** Provides grants for technical studies, historic structures reports, and other non-construction activities related to historic preservation.

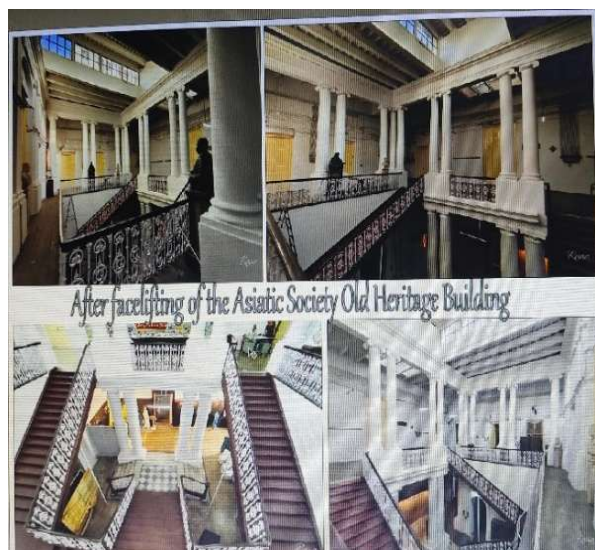
## 8.2 Key Considerations:

There are several conditions/ criteria for getting Financial Assistances from the funding agencies/ Organizations; key considerations are highlighted below-

- (i) **Eligibility:** Organizations must meet specific criteria, such as being registered under the relevant acts and having a track record of working in the field of art and culture.
- (ii) **Project Scope:** The schemes cover a range of activities, including the creation of cultural infrastructure, restoration of heritage buildings, and conservation of heritage sites.
- (iii) **Application Process:** Applications are typically submitted through a prescribed process, which may involve online portals and submission of relevant documents.
- (iv) **Funding Limits:** The amount of financial assistance varies depending on the scheme, project scope, and the organization's matching share.
- (v) **Compliance:** Organizations receiving financial assistance are subject to monitoring and inspection by relevant authorities.



**Figure-1: Before face-lift**  
*The Asiatic Society Kolkata*



**Figure-2: After face-lift**  
*The Asiatic Society Kolkata*



## 9. Conclusion:

The Asiatic Society Heritage building located at the Park Street Kolkata is now being facelifted by preventive conservation and it has given remarkable experience. It can be well understood and appreciated by comparison of before (Photo -1) and after conservation (Photo-2). Preventive conservation is an economical way of maintaining heritage buildings. The result achieved at the Asiatic Society heritage building shows that preventive conservation is practical way of maintaining and preserving aesthetics of heritage building.

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