

# Heritage Conservation

# Heritage

Heritage means something that is handed down from the past as a tradition and includes buildings, artefacts, structures, open and excavated areas, natural features and precincts that are of historic, aesthetic, architectural or cultural significance.

# Heritage

From the past

Past means old

Thus, Heritage means old and old is to respected.

First challenge is to imbibe “The Concept of Respect for the  
“Heritage” in the stakeholders.”

Stakeholders mean owners, Government, corporations,  
conservationists, architects, engineers, consultants, researchers,  
& public related to heritage

Heritage is interdisciplinary subject

# Classification of Heritage Structures

World Heritage (36 in India)

ASI Protected Monuments (3650 ancient monuments)

State Governments protected

Grade I

Grade II

Grade II A

Grade II B

Grade III

**So remember, it is not the old but old treasure to be respected most.**



# Grade – I

Heritage Grade-I comprises buildings and precincts of National or historic importance, embodying excellence in architectural style, design, technology and material usage and/or aesthetics; they may be associated with a great historic event, personality, movement or institution. They have been and are the prime landmarks of the region. All natural sites shall fall within Grade-I.

# Grade – II

Heritage Grade-II (A&B) comprises of buildings and precincts of regional or local importance possessing special architectural or aesthetic merit, or cultural or historical significance though of a lower scale than Heritage Grade-I. They are local landmarks, which contribute to the image and identity of the region.

# Grade – III

Heritage Grade-III comprises building and precincts of importance for townscape; that evoke architectural, aesthetic, or sociological interest through not as much as in Heritage 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.

# Heritage Conservation

No intervention is permitted in Grade I structures 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 are allowed in conformity with the original.

In Grade II A, internal changes and adaptive re-use may be allowed ensuring the conservation of all special aspects for which it is included in Grade II. In Grade II B, in addition to Grade II A, extension or additional building in the same plot or compound could in certain circumstances, be allowed provided that the extension/additional building is in harmony with the existing heritage building or precincts especially in terms of height and façade.

In Grade III, External and internal changes and adaptive reuse is generally allowed. Development permission for changes can be given on the advice of the Heritage Conservation Committee so that new buildings are taken considering the heritage character of the precincts.



# ASI & its Protected Monuments

A dedicated organisation which has the responsibility to look after them

Positive side is that ASI gets funds, have experts (conservationists) with them or can hire and are answerable/accountable.

Negative side is sometimes they face inadequacy of funds, slackness, bureaucratic approach.

**May not have engineers and architects.**

They are open to public

Positive side is that ASI gets revenue

Public is able to appreciate the past

Negative side is few damage the monuments being public property.

# Ownership of Heritage

Ownership;

May be under ASI, GoI

May be under Central Govt./State government/Corporations

May be owned by private persons

Heritage structures may include precincts, open areas etc. and mostly they are with government

Owner is responsible for Conservation, repair and maintenance of heritage structures

# Conservation

“Conservation” means all the processes of looking after a place so as to retain its cultural significance.

It includes all the processes of looking after a place so as to retain its historical and/scientific/social/spiritual/cultural/architectural and/aesthetic and includes maintenance, preservation, restoration, reconstruction and adoption or a combination of more than one of these.

# Aim of Conservation

The aim of conservation is to retain the cultural significance of a place i.e. Historic character is to be retained and preserved.

Cultural significance means aesthetic, historic, scientific, social or spiritual value, for present and future generations.

# Preservation

- “Preservation” means maintaining a place in its existing state and retarding deterioration.
- It means, Preservation includes continuous protective care of a place. Examples of protective care include:
  - Maintenance — regular inspection and cleaning of a place, e.g. mowing and pruning in a garden;
  - Repair involving restoration — returning dislodged or relocated fabric to its original location e.g. loose roof gutters on a building or displaced rocks etc;
  - Repair involving reconstruction — replacing decayed fabric with new fabric.

# Restoration

- Restoration means returning a place to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new materials.
- It is also important for existing heritage structures and addition/alterations for adaptation.
- Adaptation means changing a place to suit the existing use or a proposed use.

# Documentation for Restoration

- Physical record of the time, place, use and materials
  - Interventions if any
- Deteriorated historic features repaired earlier

# Materials for Restoration

- It is recognised that all places and their elements change over time at varying rates. Hence materials are required and originally used materials used in heritage structures may not be available, hence new materials may be required to be used.
- New material may include recycled material salvaged from other places. This should not be to the detriment of any place of cultural significance.

# Original Vs New & Innovative Materials

“When repairs are carried out, no effort should be spared to save as many parts of the original as possible, since it is to the authenticity of the old parts that practically all the interest attaching to the new will owe itself. Broken or half decayed original work is of infinitely more value than the smartest and the most perfect new work” [Marshall, 1923].

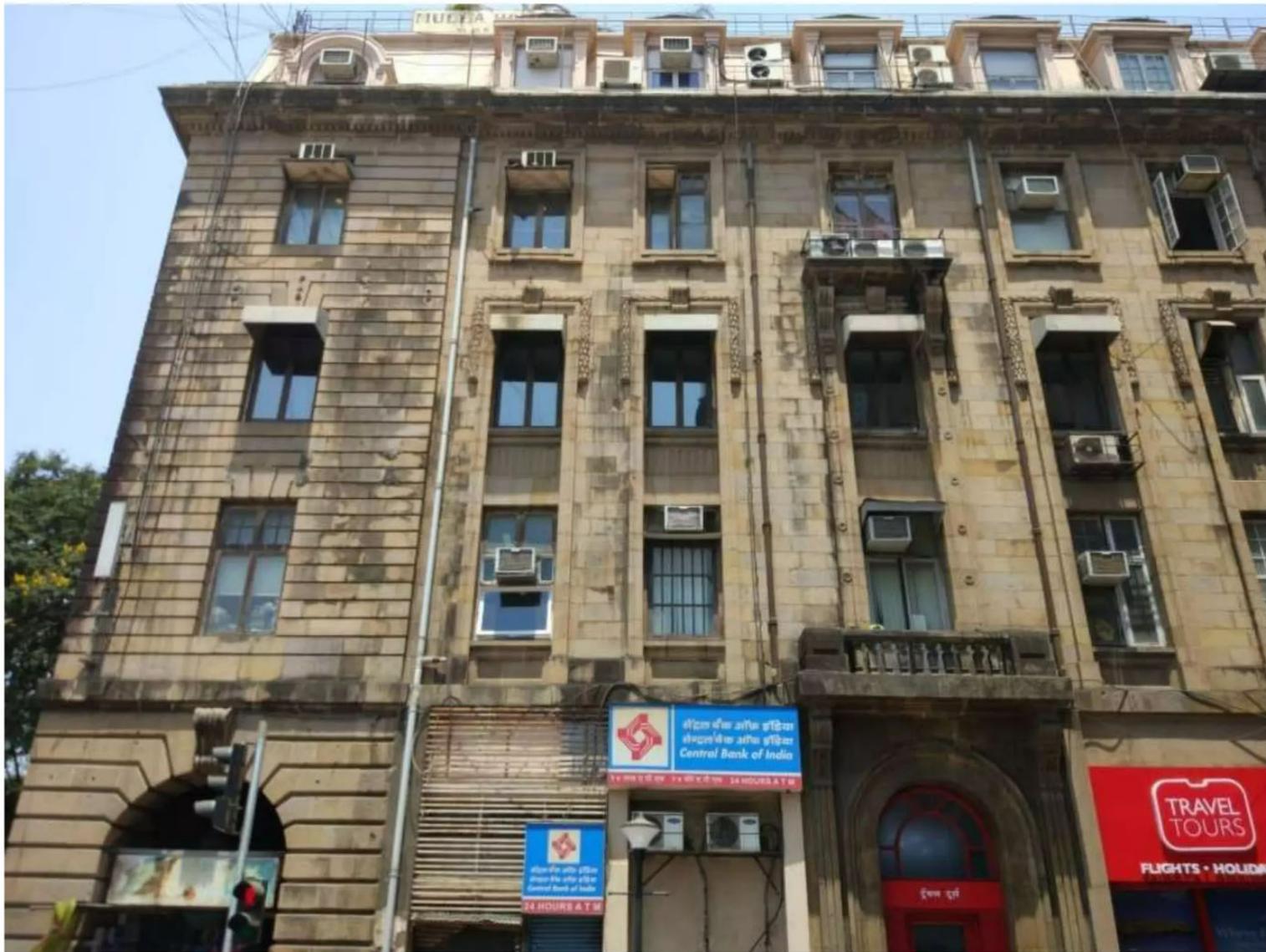
# Reconstruction

- “Reconstruction” means and includes returning a place as nearly as possible to a known earlier state and distinguished by the introduction of materials (new or old) into the fabric. This shall not include either recreation or conjectural reconstruction.
  - Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.
  - Fabric means all the physical material of the place including elements, fixtures, contents and objects.



# Maintenance & Repair

- Maintenance means the continuous protective care of a place, and its setting. Place means a geographically defined area and may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.
- Setting means the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character.
- Maintenance is to be distinguished from repair which involves restoration or reconstruction.





# Use

- Conservation is based on a respect for the existing fabric, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible. The aim of conservation is to retain the cultural significance of a place.
- Places of cultural significance should be safeguarded and not put at risk or left in a vulnerable state.
- Use means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.
- Associations mean the connections that exist between people and a place and Meanings denote what a place signifies, indicates, evokes or expresses to people.

# Conservation Management

- Conservation should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the place.
  - Understand cultural significance and participation of people involved in associations. For some places, conflicting cultural values may affect policy development and management decisions. The cultural values refer to those beliefs which are important to a cultural group, including but not limited to political, religious, spiritual and moral beliefs. This is broader than values associated with cultural significance.
    - Interpretation of the cultural significance
    - Development of policy which may require exploration
- Management of place as per the policy which include decisions and actions based on old data, information, documents and new information, perspective and changes in circumstances
  - Implementation
  - Documentation

# Settings

- Conservation requires the retention of an appropriate setting. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place. Setting means the immediate and extended environment of a place.
- New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

# Location

- The physical location of a place is part of its cultural significance.
- A building, work or other element of a place should remain in its historical location. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.
- Some buildings, works or other elements of places were designed to be readily removable or already have a history of relocation. Provided such buildings, works or other elements do not have significant links with their present location, removal may be appropriate.
- If any building, work or other element is moved, it should be moved to an appropriate location and given an appropriate use. Such action should not be to the detriment of any place of cultural significance.

# Contents

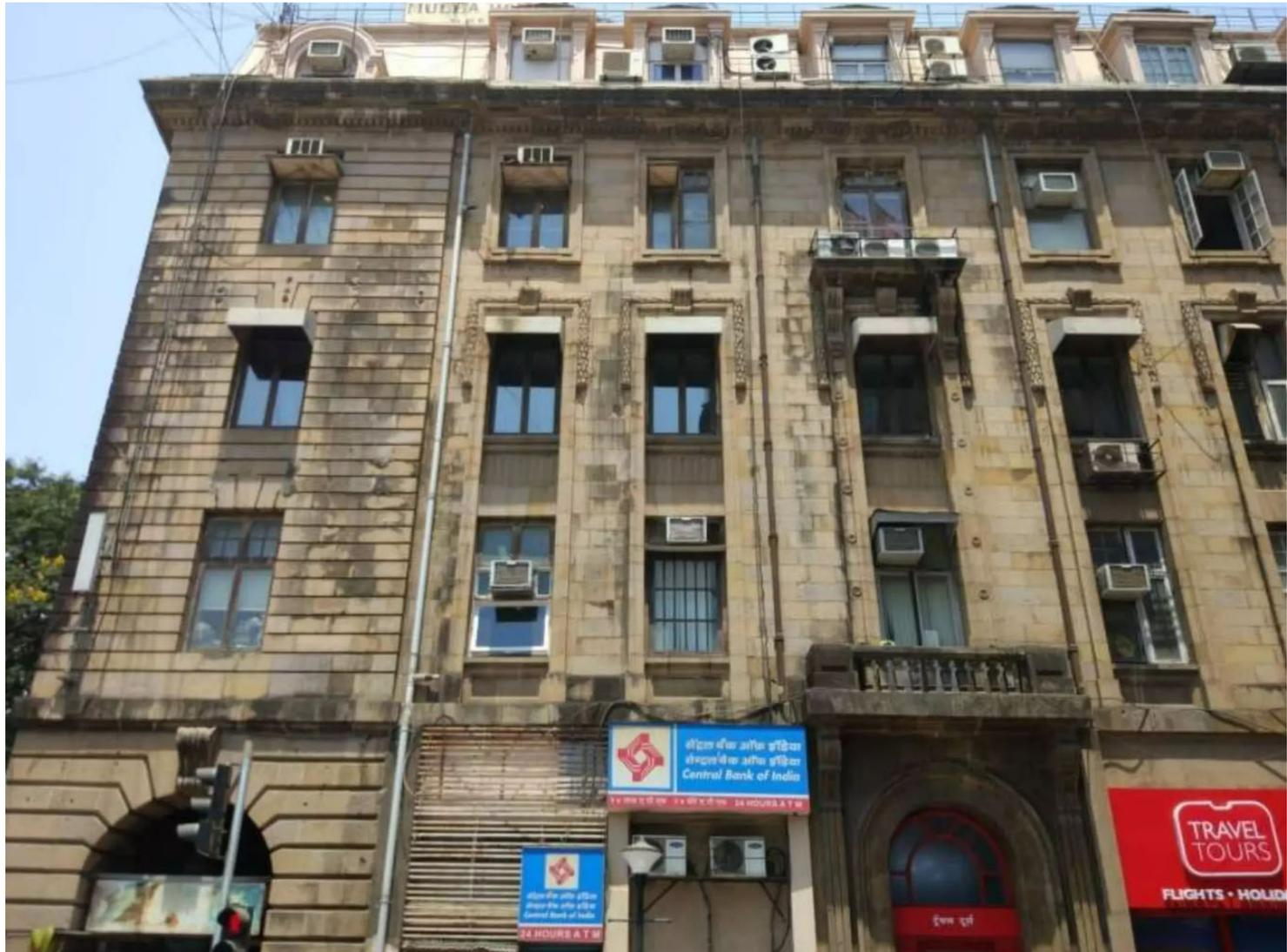
- Contents, fixtures and objects which contribute to the cultural significance of a place should be retained at that place. Their removal is unacceptable unless it is: the sole means of ensuring their security and preservation; on a temporary basis for treatment or exhibition; for cultural reasons; for health and safety; or to protect the place. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate.





# Policy for “Use”

- Where the use of a place is of cultural significance, it should be retained.
  - A place should have a compatible use.
- Hence the policy should identify a use or combination of uses or constraints on uses that retain the cultural significance of the place.
  - New use of a place should involve minimal change to significant fabric and use; should respect associations and meanings; and where appropriate should provide for continuation of activities and practices which contribute to the cultural significance of the place.





# Policy Development

- Policy development also includes consideration of other factors affecting the future of a place such as the owner's needs, resources, external constraints and its physical conditions.

# Conservation Concept

**Heritage Structures are sign of Prosperity.**

**Prosperity would not willingly let die  
If the owner is not prosperous?**

# Prosperity

- Prosperity
  - Government/PSU
    - ASI
- Others capable of understanding heritage
  - Private
    - Old prosperity and still (Royal attitude)
      - Old prosperity but not now
      - New Prosperity with Royal attitude
- New prosperity but not understanding heritage

Heritage structures require positive attitude towards them.

# Maintenance of Heritage Buildings

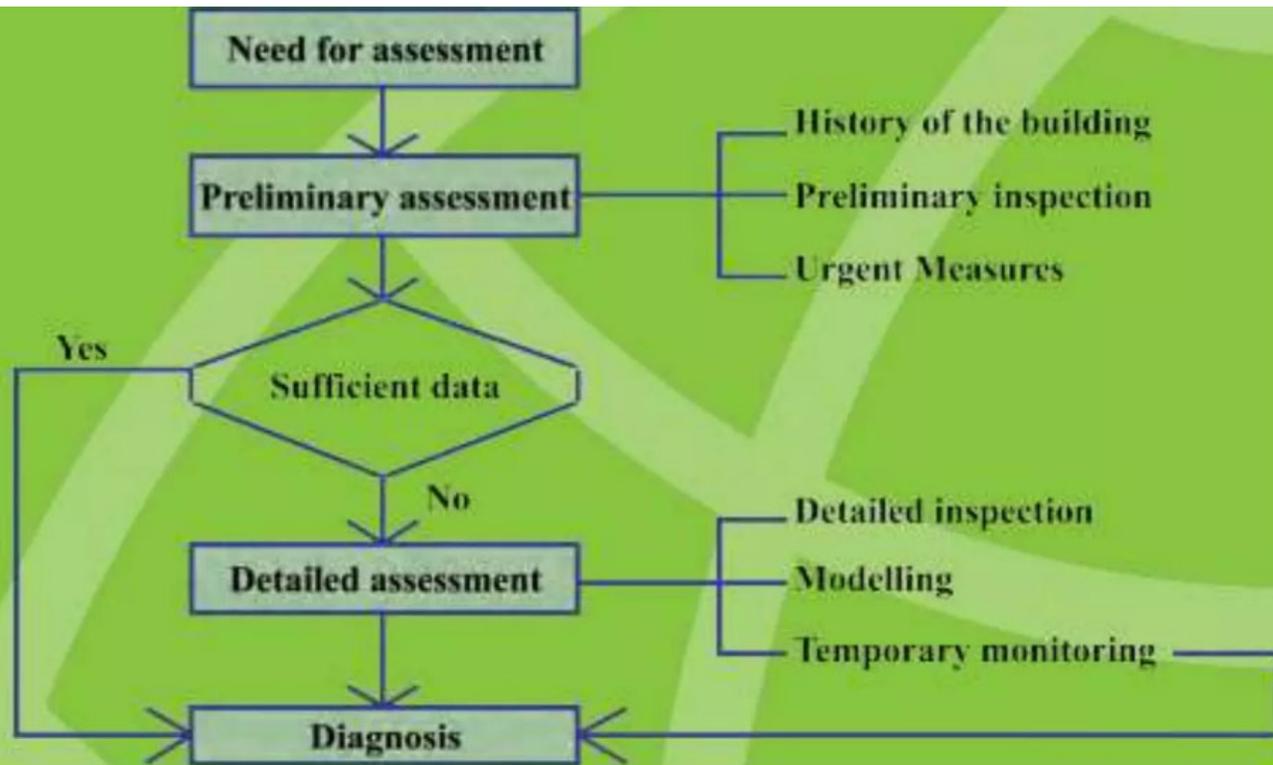
- To be maintained by the owners as per the government criterion but why should they?
  - Is there any incentive from the government?
  - Is there any advantage of up-keeping them like value increasing?
- Thus, there has to be generation of revenue from heritage structures for their preservations.

# Maintenance & Repair

- Maintenance & Repair is not considered a highly technical subject, be the architects, civil, or E&M engineers or horticulture officers and even by academicians
  - Left on very junior level engineers, supervisors and workers
  - Heritage structures require highly skilled repair and maintenance and thus cannot be left like general concept of maintenance.

# Maintenance, Repair & Restoration

- Regular inspections
  - Survey
- Conservation management
  - Engineering repair & Maintenance
  - Architectural/aesthetic consideration
    - Landscaping design
    - Horticulture operations
    - Structural design
  - Selection of materials and methods
- Execution, Quality, Monitoring, Audit and Review
  - Documentation



## Guide for the Structural Rehabilitation of Heritage Buildings

CIB Publication 335



# Principles of Restoration

- Guarantee of structural safety;
- Respect for the cultural value of the building;
  - Minimum intervention;
  - Reversibility of the intervention;
- Integration on the whole building;
  - Compatibility of the materials;
    - Minimum cost.

# Methodology for Restoration

- Acquisition of documented data about the building;
- Detailed survey of the existing condition of the building;
- Elaboration of the diagnosis (eventually, with carrying out tests);
  - Assessment of the structural safety;
- Design of the solutions for the intervention;
  - Execution of the intervention;
  - Documentation.

# Decisions

- The decisions about the solutions to be adopted on the intervention should still be submitted to a cost-benefit analysis considering cultural significance, in which all the relevant aspects will be considered, namely, the compatibility of the structural safety with respect to the cultural value of the building, and the cost to be as low as possible, and review of proposal by the stakeholders and experts.
- Approvals of competent authority to be obtained.
- Decisions cannot be delayed else heritage structure will get deteriorated fast.

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# Regular Inspections

- Need of maintenance, repair and restoration
  - Need of experts
  - Need of materials and methods
    - Need of mode of execution
    - Need of quality management
- For preserving the structures by taking timely action

# Survey

- Survey of the building
- Survey of the defects in the building
  - Rapid appraisal
  - Detailed appraisal
- Survey of the precincts
- Survey of the sources affecting/damaging heritage structures
- Survey of the drainage conditions, geotechnical aspects, material availability, workers availability, seismic data, flood/wind data etc

# Survey

Survey by field visits,  
observations,  
Manual  
Photography,  
videography,

Aerial photography,  
and

satellite photographs  
Are very helpful

# Detailed Assessment

## Detailed Assessment

When the available information is not sufficient to elaborate the diagnosis of the situation in the building, the preliminary assessment will be complemented by a detailed assessment of the building.

The detailed assessment will include a detailed inspection, which can comprise in-situ tests, laboratory tests, field tests, assessment of the foundations and also field measurements.

There must be no damage as far as possible during testing therefore NDT is preferred

# Structural Analysis

Structural Analysis

Structural assessment

Safety level of the structures

Modelling of the structure/building

Compatibility of materials

Seismic vulnerability

Vulnerability from fire, floods, wind and  
other natural disasters

Documentation

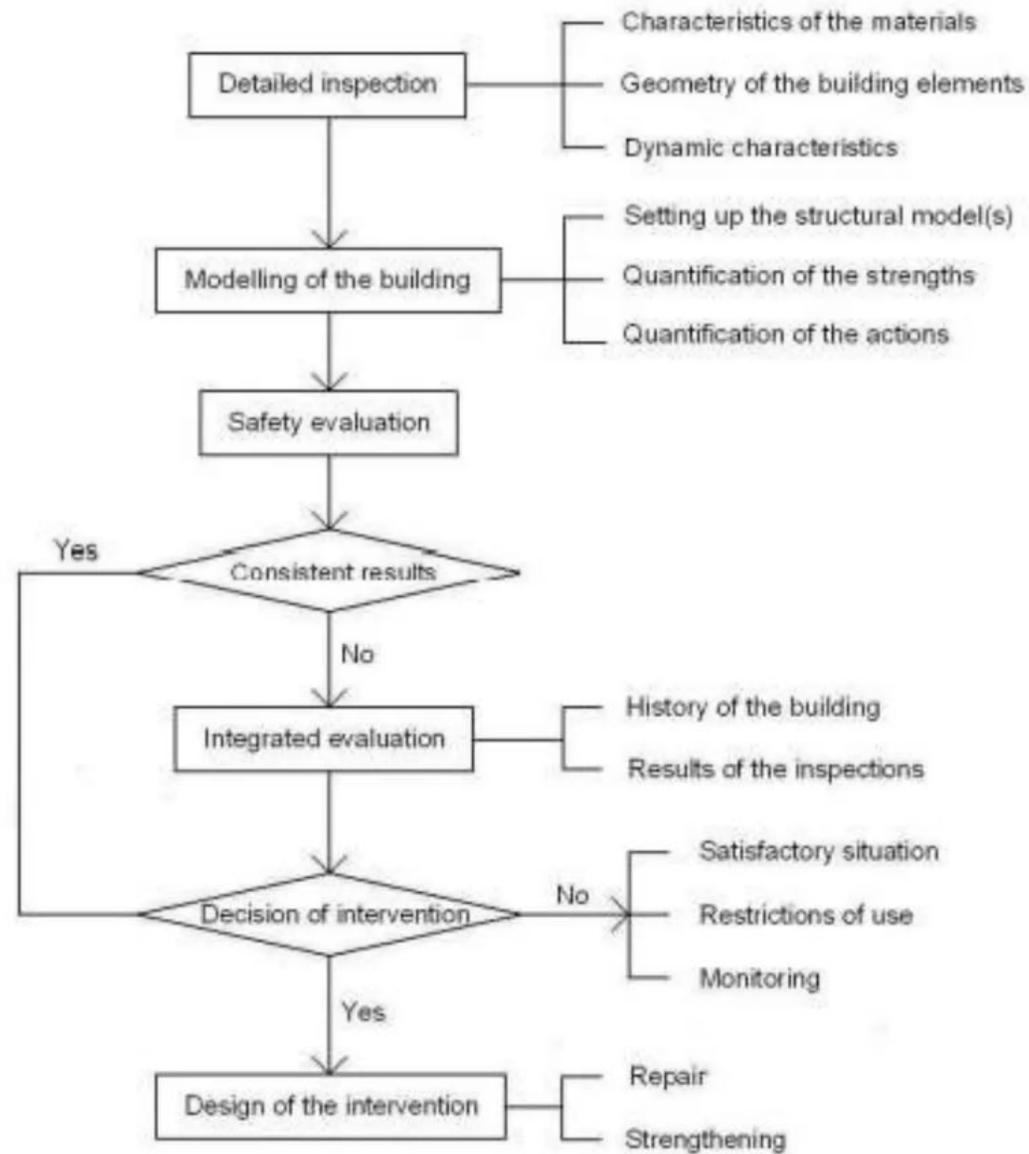


Figure 25: Flowchart of the actions to be undertaken in the phase of the structural assessment of the building (37)

















































































