



ADAPTIVE REUSE OF HERITAGE BUILDINGS

(To retain the heritage value of the property)

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ABSTRACT

This study has been one of the ways to retain heritage value even as it continues to serve other purposes. It has been designed to conserve old monuments like Forts, Palaces, Houses, Havelis, and even areas of cities to tie a place's history to the city and its culture. This relationship gives older buildings a purpose and value. Repurpose of a building is a current trend because of its cultural, architectural, artistic, and economic benefits.

INTRODUCTION

In different communities' current struggle for environmental sustainability, "recycling" has become a subsequent solution. With intentions to reduce, reuse, recycle waste, new life does found in everything from bottles, boxes, vehicles, and buildings.

Anything that is not degradable is advised to be reused for the same purpose or new use. Similarly, old buildings are also "recycled" - they are given a new function to keep them active. This method is called Adaptive reuse.

India is a country with a history that goes back several thousand years. All these years, our ancestors have given birth to some of the most significant architectural marvels of the world. However, the historical remains are broadly categorized into two. The first ones are the monuments that gained historical significance over time, and by the nature of their design, space, scale, and original use attracts thousands of tourists. The second ones are the unlisted historic buildings like palaces and Havelis, which, though our historic and cultural properties, cannot draw people to them. Hence, it is urgent to revitalize these heritage buildings by reusing them for proper modern-day function. Thus, our future generations may benefit and be aware of our heritage and where we have come.

As permanent and apparent records of an era that has vanished, India's palaces have a role in discovering the country's past. They stand as the heirs of royal families, offices for municipal authorities, museums crowded with visitors, and pleasure gardens filled with families on outings.

Conscious adaption of old buildings into something new is a familiar notion. Even in history, there have been various buildings that adapted into some other use. For example, during the war, many buildings were temporarily used as hospitals and base camps. A few decades after industrialization, many abandoned factories and warehouses converted into schools, hospitals, and even religious establishments that have undergone similar reincarnation, blending the new with the old. Nowadays adaption of the royal palaces into heritage hotels or resorts has become familiar among the people.

The admiration of history has become a significant pastime by the considerable number of visitors, Indian and foreign, that crowd royal sites and residences all over the country.

There are many historical forts, palaces, mosques, temples, and places of historical importance within Gujarat. These palaces and defenses can be converted into heritage hotels to keep tourists close to the vibrant history of Gujarat. In addition, heritage hotels can give the royal living experience to the tourists.

In the case of heritage buildings reused, the ambiance of the existing building provides a unique experience for the user.

WHAT IS CONSERVATION?

The word 'Conservation' has different meanings and interpretations for other people and in different situations.

The word 'Conservation' means:

- (i) The action of conserving and the to-infinitive to keep in a safe or sound state
- (ii) Protection, preservation, and careful management of the natural environment

The meaning of the word 'Conservation' as described by the world-renowned conservationist Bernard M. Fielden is that conservation is the action taken to prevent decay. It embraces all the acts that prolong the life of our cultural and natural heritage.'

Different values are assigned to the cultural properties at the time of building it. Emotional values of wonder, identity, spiritualism, symbol city, and continuity. Cultural values of history, architecture, and aesthetics. Usability values of functional, economic, educational, social, and political. Conservation must preserve and, if possible, enhance these messages and values of the cultural property.

Conservation involves making interventions at various scales and levels of intensity determined by the physical condition, causes of deterioration, and anticipated future environment of the cultural property.

NEED FOR CONSERVATION

The historical buildings, irrespective of their context and style, possess their inherent character and dignity. With these attributes, they stand tall and apart from any new construction of today. If they left to themselves, the built fabric would decay, but the proper thought process, initiative, appropriate treatment, and technology can convert them to assets for the society and nation.

Encoded the messages and values from the past does not appear to be modifying the subject of the historical monuments., the historical monuments remain to present as living witnesses of their age and traditions. Moreover, These buildings are the point of reference to socio-cultural history. Hence these built forms need to be protected from the currents of change.

DIFFERENT APPROACHES TO CONSERVATION

Broadly there are three major approaches to conservation that someone can identify.

1. Preservation
2. Restoration
3. Adaptive reuse

1. PRESERVATION

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration. Its primary objective is to keep the cultural property in its current form, and if necessary, somebody must carry out repairs to prevent further decay.

Prevention of deterioration is a part of preserving cultural property. Prevention involves protecting cultural property by controlling its environment, thus preventing agents of decay. Hence, prevention includes controlling internal humidity, temperature, and light and preventing fire, arson, theft, and vandalism.

2. RESTORATION

Restoration means returning the existing physical condition of a place to a known earlier state without introducing new materials. The main aim of the repair is to revive the original concept of the cultural property by preserving and revealing its aesthetic and historical value. Depending upon the condition of the built form, the restoration process can be carried out at different degrees.

Reproduction is also a part of the restoration process. For example, to replace missing or decayed elements, one must reproduce them while maintaining their harmony.

Reconstruction is also a part of the restoration process. For example, some parts of the building were demolished by disasters like fire, earthquake, war., with new materials exploded part must reconstruct.

3. ADAPTIVE REUSE

In the term "Adaptive reuse," the word "adaptive" simply means 'having a capacity for adaption,' the word suggests that the structure or building once used for a particular purpose, which may have come to an end, due to various reasons and therefore it was reused. The word "reuse" simply means 'to use again'; the word suggests that the structure was not only reused for any purpose, but the new function was adaptive.

The best way of preserving any building is to give new life to it. The original use is generally the best for the conservation of the old fabric. It means fewer changes than the other adaptation, but built forms have often outlived their original function as it is no longer valid in the current times. Hence, adaptive reuse is often the best approach to conservation for such architecturally modest but historically significant built forms. In this way, historic and aesthetic values can be saved economically and brought up to contemporary standards.

Old buildings often outlive their original purposes. Adaptive reuse is a process that adapts structures for new users while retaining their historic features. It was initially developed as a method of protecting historically significant buildings from demolition.

Adaptive reuse can be defined as "a variety of repairs or alterations done to an existing building that allow it to serve contemporary use while preserving the past features." A building can no longer function with its original use. Therefore, a new service through adaptation may be the only way to preserve its heritage significance.

It is often described as a "process by which structurally sound older buildings developed for economically viable new uses."

The adaptive reuse of a historic building should have minimal impact on the heritage significance of the building and its setting. The new materials should always be fitted to the old and not the old adapted to accept the new.

The success of the reuse of buildings will depend on what kind of adaptive reuse is suggested for the space. For example, many historical structures a For these structures, a common type of intervention is rehabilitation, also referred to as adaptive use. Rehabilitation describes a suitable approach when existing historic features are damaged or deteriorated. Still, modifications can be made to update portions of the structure, even adapting the building for a new purpose.

NEED FOR ADAPTIVE REUSE

As discussed before, there are mainly three approaches to Conservation:

1. Preservation
2. Restoration
3. Adaptive reuse

Any of these approaches to conservation cannot be applied universally to all buildings. At the time of conservation, choosing appropriate way depends on many dimensions such as,

- (i) The historical value of the building
- (ii) Socio-cultural significance
- (iii) Physical condition

Preservation and restoration are possible only when a building can generate public interest by becoming a tourist attraction or can survive on the original function in which it was built. However, for buildings, which do not fall into either of these categories, the only way to protect them is "to keep them in active use, i.e., adaptive reuse."

To retain an old building when its immediate context is changing drastically, and its original function stays no more valid, one has to adapt to the changing conditions by making alterations required for its new use so that they do not affect the intrinsic value of the historic building.

Also 'it is necessary to maintain continuity and change in the built environment. Continuity implies a slow and steady rate of change. Change is necessary to keep the concept of physical form alive. It is the function of a building, the activity within and around it, that gives it meaning. A building continues to live through its change of use in the absence of the old functions.'

The Act of Conservation can only guarantee the continuity of cultural identity throughout modernization in terms of Adaptive reuse.

ADVANTAGES OF ADAPTIVE REUSE

To conserve and save a historic building, sometimes artistic and historical value alone may not convince the decision-makers. There are other benefits also to consider in adaptive reuse. Adaptive reuse, if dealt with the right approach, can have environmental, social, cultural, and economic advantages.

ENVIRONMENTAL

Environmentally, as new construction is not required, natural resources used in manufacturing new materials are not utilized, and thus adaptive reuse also promotes conservation of the environment. In addition, the energy consumed by materials and labor. It is much less when an old building is reused without being demolished.

One of the leading environmental benefits of reusing buildings is retaining the original building's "embodied energy." Their embodied energy is retained by reusing buildings, making the project much more environmentally sustainable than entirely new construction. New buildings have much higher displayed energy costs than adaptively reused buildings.

The Australian Greenhouse Office notes that the reuse of building materials usually involves saving approximately 95 percent of embodied energy that would otherwise be wasted. In this context, the reuse of the heritage buildings makes good sense.

SOCIAL

Keeping and reusing historic buildings has long-term benefits for the communities that value them. Adaptive reuse can restore and maintain the heritage significance of a building and help to ensure its survival.

Adaptive reuse can help people and places retain their identity and make people aware of their heritage and its root value, bringing about stability in their lives.

Societies increasingly recognize that future generations will benefit from the protection of areas, including heritage value. They act as valuable sources of information and preserve that precinct's lifestyle, construction technique, and architecture.

CULTURAL

Preserving the old built forms can help in understanding the cultural diversity of the society. It brings awareness about our cultural heritage. Culture needs to be preserved for its intrinsic value and its contribution to the identity of a place.

Customs and traditions also demonstrate themselves in the architecture of the place. The extent and nature of it depend on local and socio-cultural dynamics.

The urge to learn about different cultures of the society indirectly contributes to the concept of tourism and the growth of the tourism market. These places become the starting point to understand the culture of the site.

ECONOMIC

The concept of adaptive reuse is economically very viable. Economic viability is the prime reason for reusing the old buildings for new functions more substantially. The cost of new construction is less when the existing structure is retained, and further, the recent activity generates the income that covers the cost of restoration or refurbishment. Thus, the current structure utilized, demolition costs avoided, and human energies saved.

Adaptive reuse of historic buildings can be economical, often costing only two-thirds of the new construction. The remaining capital can be used for small jobs that the building requires rather than erecting the new one.

The old buildings are built with local materials; hence, local materials and labor can be utilized when restoring and readapting the old buildings. This will generate employment in local peoples and reduce costs, besides meeting the social cause.

HERITAGE AND ADAPTIVE REUSE

As derived from inheritance, heritage is defined as "that has been or may be inherited and involves both previous and future generations." Heritage provokes an individual a sense of belonging to the place, community, directs the user to gain an overall appreciation of the past.

The National Heritage Conference Defined Heritage as "**that which a past generation has preserved and handed on to the present and which a significant group of population hands on to the future.**" It is an inheritance to be passed from one

generation to the next. Each generation contributes another layer to the historic environment and makes decisions about what it wants to keep from the past so that there is a constant reinterpretation of the historic environment.

Heritage does not apply only to old historic buildings. It could be sites, areas, land, landscapes, buildings, and artifacts that link us to the past. Heritage also comprises traditions, culture, customs, crafts, local art, materials used for buildings, and even the way they are used, i.e., construction methods and techniques. It stands as a reminder of the past; it contributes to the image of a place and imparts a sense of identity, continuity, and security.

Heritage-built forms that can be designated for conservation fall into two major categories. The categories are formed based on the architectural and historical values these buildings possess.

Firstly, it consists of built forms which are considered of national importance and are monumental scale built forms such as Taj Mahal, Red fort., Such buildings over time have gained historical significance, and due to the nature of their design, scale, and original function, have become major tourist attractions today. Therefore, preservation and restoration are more suitable approaches for such built forms.

Secondly consists of built forms with modest architecture and limited historical values. Therefore, it can be further divided into two parts according to its architectural and historical values.

Built forms with important architectural heritage have historical values for a particular city in which they exist. Havelis, palaces, and other residences come under this category. These built forms speak of an understanding which was very much part of day-to-day life.

They have built forms with limited architectural values. The factory sheds and abandoned mills come under this category. These built forms may not have architectural values, but they have witnessed changing technology and shift in the city's commercial or industrial area.

These built forms hardly survive their original functions. So the only way to save them is to keep them in active use.

Heritage is under increasing threat from various forces like population growth, environmental degradation, migration of people, and urban redevelopment. The damage to heritage is mainly due to a lack of awareness, advice, alternatives, and financial support. Also, natural and artificial disasters could be one of them.

The greatest danger to the long-term safeguarding of the heritage is inadequate public understanding of the need to conserve the heritage and inadequate steps taken towards these heritage resources. Awareness and conservation efforts are insufficient compared to the number of heritage buildings present.

The new addition or readaptation should respond to the informal economic activity in the town center and act as a link to the traditional way of life, which sometimes might have even been lost. After designating an area for its heritage interests, it defeats the character's purpose to be damaged or by allowing new development out of place, scale, or context with the area. Any development in such an area must preserve or enhance the unique character and appearance of the area.

DIFFERENT APPROACHES TO ADAPTIVE REUSE, SHOWN IN INDIA

Indian independence is the main event of our history. The country's political structure changed with independence, and a new constitution and laws were formed. Before independence, our country was divided into two parts: (i) 17 The British Province where there was direct British rule; and (ii) 562 Princely States which were partly governing. At the end of the British rule on 15th August 1947, two nations, namely India and Pakistan, appeared in India. Now The Princely States had to decide whether to remain independent or to join either of the nations.

In India, Wealth Tax Act came into force with effect from 1st April 1957. This is a tax on the value owned by a person levied under the Wealth-tax Act, 1957. It is levied @ 1 percent on the amount of wealth as on 31st March every year where such amount exceeds Rs. 30 00,000. It covered six types of assets- House, jewelry, motorcar, aircraft or boat, urban land, and cash in hand.

As the Act said, the tax exempted anyone building a former ruler of the Princely States, which the Central government has declared as his official residence. However, as a result of this Act, the former rulers gave their palaces or buildings other than their official residences to the government on lease for the use of Government purposes like courts, offices of municipal authorities, and educational institutions in the palace complexes.

Even in history, there have been various buildings that adapted into some other use. During the war, many buildings were temporarily used as hospitals and base camps. A few decades after industrialization, many abandoned factories and warehouses converted into schools, hospitals, and even religious establishments that have undergone similar reincarnation, blending the new with the old. Hence one can say that the concept of "reuse" is not new in India. It has become a way of life consciously or unconsciously. We find Havelis reused such as shops and offices. Palaces reused as government offices, palaces into hotels, mill buildings into offices, residential streets into commercial streets.

Different adaptive reuse approaches can take three forms according to their respective historical scenarios and the approaches to housing the new function in the built form. They are:

- (i) It could keep a building for its **original use**.
- (ii) It could adopt a building to a new use; **change in use**.
- (iii) Only its facade is maintained and changed the rest of the building; **Facade retention**.

ORIGINAL USE

The best use for a building would be one for which it was initially designed. This can be seen in some religious structures, such as old temples and mosques. However, to use a building for its original use, one must restore it to its original form. This means minimum intervention to recreate as much of the original character as possible. The example of the Bombay high court can be related to a similar case.

The high court building had been in use for over 120 years. The pattern of the use in the building was such that the original design could have never been imagined. Over the years, pressure on spaces in the building grew so much that the court spilled out onto the adjoining building, and three buildings in the court compound were functionally incorporated. Original six rooms grew to twenty-four courtrooms. While the courtroom increased four times, the number of facilities like administration offices and toilets also increased, thus causing immense pressure on space. By the time has been so expanded that activities spilled over to the verandah and mezzanine. The building needs reorganization of spaces and relieving the pressure on the building.



CHANGE IN USE

The old functions need to be updated with the change in time. This building brings us to the form of reuse- the change in the use of a building. There are few examples in India where reuse has been done very skillfully and successfully.

Neemrana fort palace: The Neemrana fort palace was built in 1464 AD, located in the Alwar district. It was abandoned by the last ruler Maharaja Rajendra Singh at the time of independence.

ORIGINAL USE OF NEEMRANA FORT

Neemrana is used for both protections of territories as well as residences. The construction follows the site's topography, which explains its many levels of 'Mahals,' Courtyards, and staircases.

REUSE OF NEEMRANA FORT

Though Neemrana's original function is the residence of the kings, it works as a five-star resort catering to the dreams of those who can afford to be transported to the past. There are 22 rooms or suites, each theme, often retaining the original name and ambiance, such as Hawa Mahal, Sheesh Mahal. The main aim was to adapt traditional spaces to contemporary uses and lifestyles and making the palace liveable. As far as possible existing materials have been used, but for practical reasons- mainly cost- modern materials and techniques have been used wherever necessary.



FACADE RETENTION

This form of reuse practice is prevalent in western countries. It consists of the partial demolition of the buildings behind the facades and the redevelopment of a new building. Thus, the facade represents the 'public face' of a building, forming the importance of the townscape, whereas the interior represents the 'private face,' being seen only by the building occupants. Facade retention thus preserves the public face and stands as a symbol of our past.

One of the examples from the works of Richard Rogers was to convert a fish market, built-in 1875, into a dealing house. The original market hall, now designed as a trading floor for 456 deals. In the building, a mezzanine has been inserted to provide additional space—the more obstructive of the original space made open in the middle.

ISSUES TO BE CONSIDERED IN ADAPTATION

1. *Maintaining the integrity & Cultural significance of the buildings*

The adaptation should not substantially detract from its cultural significance. Substantially reversible changes or changes that require a minimal impact should be done. There should be no loss of cultural heritage. In addition, we have to learn to appreciate the unquantifiable values of age, character, and architectural quality.

While reusing a building, an important aspect to be kept in mind is its original cultural significance. For it is this character that defines its architectural heritage. Therefore, any additions or alterations to an old building, whether major or minor, should not overpower the essence of its original form. Even if there is an apparent clash of odd style or material used, due respect should be shown to the original character of the building.

2. *Visual importance in the regional context*

Significant associations between the building and its location should be respected, retained, and not observed. Any alterations or additions should be compatible with the location. To a visitor, the regional character of a building should be reflected even after any changes have been made. Visually, the building should be contextual to its location and should not seem out of place. The location is a significant factor in deciding how many alterations or additions should be made to a building, especially a historical one.

3. *Compatibility with historic character*

New functions and activities should be compatible with the character of the historic town or urban area. If a building needs to be reused for an entirely used function, this new function needs to be compatible with both the building and the location. The new function of the building would depend on two factors: how much change the building can accommodate; and whether the community requires such a change. For instance, an unused mill lying in a primarily commercial area could be reused as a commercial building such as a mall or an office block. However, if it lies in a residential area, it could be converted into a community space. If it lies in a historically significant area, it could be used as a museum or a tourist attraction.

4. *Contemporary elements of functionality*

The introduction of contemporary elements should contribute to the enrichment of an area. New installations or improvements should facilitate public services. Additions or alterations should respect the integrity of the structure, its character, and its form while being compatible. If a building is reused and new services such as plumbing, wiring, and other modern conveniences need to be installed, architectural features such as the facade or the interiors should not be spoilt. Shafts and ducts should not impose on the existing features and attract attention. Escalators and elevators, if needed, should be introduced gradually through a series of changes in interiors, not as an out of place feature. Any alterations to the facade should either be blend with or integrate harmoniously with the existing features.

5. *New volumes, materials, and finishes*

New volumes, materials, and finishes should echo contemporary ideas but respect and enhance the spirit of the original. Additions should not detract from the exciting parts of the building, its traditional settings, the balance of its composition, and its relationship with its surroundings. The introduction of contemporary elements can contribute to the enrichment of an area. Any addition, irrespective of how large the volume added is, should not overpower the old building on which it is based. New finishes essential to complete the building can be of three types: a restorative process of an old feature using the same or similar material; a finish showing the influences of the old without being a blatant imitation, using new materials; or using new materials in a new style, which at the same time reflects the old materials.

CONVERSION OF PALACES INTO HOTELS

Most of the palaces in India that have converted into hotels are 19th and early 20th century structures built on the European model, such as service areas, guest rooms, reception halls, dining halls., for all intents and purposes, just like hotels.

Many of these palace additions and extensions have been made more with a commercial outlook and not a purely conservational one. In many heritages, more and more guest rooms were added to increase the hotel's capacity. In some cases, these are modern in style and indistinguishable from any modern-day hotel room. Given the dearth of government funds for archaeological preservation, most of these buildings would be falling into utter ruin if they do not put to some form of commercial reuse.

However, as observed in many of the heritage hotels in Rajasthan, newer and newer rooms are being added to increase the hotel's capacity. This is because of the rapid growth of tourist influx, attracted by the unique experience of traditional royal living. However, so much commercialization of these heritage hotels has led to a change in the atmosphere of many hotels, which now have more artificial and tourist quality.

The recent growth in the number of such hotels is also a result of the commercial development of hotels. The heritage hotel is selling better in the tourist market, attracting tourists from far and near.

CONCLUSION

Generally, the changes are most radical on the interior, where more latitude may take to maintain the building's historic integrity. However, exterior changes are generally minimal. When adaptive use is chosen as the appropriate intervention technique, alterations or additions may be made, but they should not be confused with original historic elements.

New construction is typically contemporary in design and may be either compatible with or contrasting to the historic structure; the compatible design is a new design that maintains some existing elements, such as scale, color, massing, proportions, and materials. It takes some ties to the older elements, if not fully matching them; typically, the newer portion is architecturally expressed as supportive in design to the original building rather than in competition with it. Contrasting design tries to respect the older structure by emphasizing differences rather than similarities.

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