

Managing Heritage Conservation and Urban Development: Approaches to Settlement Conservation in Historic Towns of Gujarat, India

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Abstract

The living historic settlements are the result of constant evolution and growth. The current situation of these settlements in India reflects the natural and cultural determinants that shaped their emergence and development in distinctive ways. The changing dynasties, trade and commerce, and significance as religious or cultural centres are some of the key parameters that shape the historic settlement in a specific manner. With time, the process of cultural amalgamation and exchange of ideas develops and exhibits its confluence through rich and layered manifestations in the form of built interventions.

Indeed, they exhibit layers of interventions responding to the changing needs of the time. Amidst the process of urbanisation, the built forms and patterns from the past have still survived the development pressures. Multiple factors define the condition of heritage sites, including ownership, land use patterns, and socio-economic context. However, the rapid growth of urbanisation is accelerating construction activities in heritage precincts, posing a threat to the values associated with them, both tangible and intangible.

In this context, this paper examines the issue of heritage conservation and urban development in order to develop approaches to settlement conservation in historic towns of Gujarat, India. It employs archival research and field work involving physical observations of three historic towns of Gujarat, in India. Vadnagar, Kapadvanj and Bharuch.

The study reveals that the impact of unguided built interventions on the values associated with heritage sites is critical. It thus concludes that there is an urgent need to derive heritage-centric development bylaws to protect the integrity and authenticity of the historic settlements. The research identifies the impact of built interventions in the context of living historic settlements and develops a framework to create context-responsive interventions for retaining heritage values in the heritage sites in India.

Keywords: Settlement Conservation, Historic, Urban Development, Growth, Context Responsive Development, Integrity, Authenticity

Introduction

Each settlement has its precursors, which gave birth to the built environment. The context, both natural and cultural, plays a significant role in its emergence. The interventions done by traditional communities responding to their needs are deeply rooted in their times, which is evident through the use of materials, adopted building technologies, spatial designs, idioms, stylistic developments and approaches with which the shared way of life was realised.

The current condition of the traditional settlements is the result of successive additions and reminiscence of past interventions done during the previous dynasties. It comprises the built forms such as traditional houses, streets- street network, institutions, community spaces and monuments commemorating the past. These elements are also the components with which the evolution of the given settlement is established.

Historic settlements have emerged, keeping a source of water as one of the key factors. They are either created on the banks of a natural water source or comprise man-made interventions, such as wells, tanks, and stepwells, which signify the scientific values associated with the place. The topographical condition of the place plays an equally important role in determining the formation of streets, the location of major institutions, and the orientations of house forms. Along with the response to the natural tenets, the traditional settlements also reflect the cultural considerations in the design of the part-to-whole. The settlement pattern signifies the community living where the neighbourhoods represent caste, creed and occupation. The provision of religious institutions in proximity not only addresses the cultural needs, but also acts as a catalyst connecting and binding the previous generations with the upcoming ones. The sacred nodes and centres are seen as the psychological boundaries of their territory and transitions to neighbouring residential spaces.

The shared open spaces, acting as an extension to the individual houses, provide an opportunity to accommodate social and culturally significant festivities. The nature of these spaces is flexible as they are multi-functional. These spaces become a platform for religious gatherings, ceremonies and to perform rituals on significant days.

The visual integrity of the street generated through the homogeneous facades of all adjoining dwellings symbolises the collective cultural identity. The facade of these houses comprises ornate structural members, which are testimony to the exceptional architectural features, artistic expressions and craftsmanship. The details of these space-making elements represent the rich aesthetic taste of the community, which is deeply rooted in nature as a source of inspiration, and are manifested as decorative features, motifs and figures on these facades.

The scale and proportion, consideration of local climatic conditions and choice of material respond to the understanding of context-responsive solutions. The spatial organisation responding to the culture-specific needs clearly shows the relationship between the generated built environment and activity pattern.

The above shared aspects related to settlement clearly suggest a coherence in the traditional built environment from a unit to an entity. In many cases, the settlements have withstood the severe loss of cultural values due to natural calamities such as earthquakes, floods, landslides, etc. The drying of water sources has also led to the migration of entire settlements, resulting in their complete abandonment. The loss of traditional settlements is more driven by human interventions over the course of time. With the rise of urbanisation, commercialisation, and changing times, the needs have changed. The selected cases of Vadnagar, Bharuch and Kapadvanj are settlements comprising monuments, archaeological remains and settlements. The previously designed built environments have limitations to accommodate the changing needs of the communities. The shift in the idea of collective living to prioritising individual taste has led to abrupt interventions. With the arrival of newer materials and techniques, the old precincts are being transformed. In the process of accommodating changing needs, the integrity of the significant values is compromised at multiple levels. There are also existing national schemes providing financial aid to rebuild the traditional houses.¹

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The government initiative offers financial assistance for house construction or renovation under Pradhan Mantri Awas Yojana (PMAY). This scheme provides subsidies and direct financial aid to eligible beneficiaries. The additions and alterations done to the traditional built forms are leading to a loss of the sense of place. The disappearing open spaces, semi-open spaces and original spatial organisation at the houseform and precinct level are indicating a need to redesign the current practices, management frameworks and available guidelines from urban local bodies on how the change should be managed. The research examines the current interventions and their impact on the authenticity and integrity of the traditional settlements.

The research aims to explore the impact of built interventions in the context of living historic settlements. It intends to propose a context-responsive framework for safeguarding the sense of place while transforming the historic settings. Its objectives are as follows.

- To help retain the values associated with the heritage precinct.
- To identify how to retain the authenticity and integrity of the entire settlement and its morphological components.
- To facilitate the incorporation of the changing needs of society through contextual development.
- To define mechanisms and approaches for the protection and management of heritage precincts in India.
- To enable the prioritisation of heritage-centric development in India.

Theoretical Framework

The international frameworks and heritage conservation governance have recently been focusing on sustainable development (Sims, 2016). The idea of economic empowerment, well-being, and social sustainability of the community has been initiated across the globe. Simultaneously, the tourism-centric development, mass migration, and monetisation are the crucial challenges impacting the heritage sites. The dynamic complexities associated with living historic settlements involve the economic, social, cultural and physical components, creating their distinguished nature of place (Dovey, 2005).

The preliminary report on the proposed UNESCO Recommendation on the Historic Urban Landscape emphasises the loss of traditional functions and character in historic areas. Adopted by UNESCO's General Conference in 2011, Historic Urban Landscape has been developed as a way of rethinking the relationship between heritage and development. HUL is a significant reference for the framework to define steps and processes from identification to vulnerability assessment, to partnerships and local management frameworks. (UNESCO 2011)

“For the recognition of the cultural value of contemporary architectural creation in historic areas, there is a need to respect the integrity and the continuity of the design features of a given place, a basic rule of intervention in historical settings that is often ignored by contemporary architectural creativity.”

Bandarin & Oers, 2012:66

The incorporation of a planning framework that incorporates conservation as a strategy for the management and development of a settlement results in an approach that responds to the sense of place (Narayanan, 2016). Compared to calling it development, the idea of reviving the abandoned settings, revitalising and renewing the sense of place, contributes to the continuity of living heritage. (Naidu, 1994) The idea of considering traditional settings in the context of urban development is seen as a problem, rather than a cultural asset (Menon, 2010). Needless to say, this attitude must change. As the authors above show, they offer great potential to develop culture and identity instead of becoming ‘a problem.’

Indeed, these ideas provide a wholesome theoretical framework for the study of dichotomy of heritage conservation and urban development and ascertain the potential approaches to conservation of settlements in historic towns of Gujarat in India.

Review of Literature

The approaches to conservation have continuously evolved. The evolution from the concern for protecting artefacts, to the shifted focus to monuments has eventually incorporated precincts, sites and landscapes into the consideration for recognising as heritage. The loss of cultural references, historical evidence that allowed societies to associate, has been a driving factor for the realisation of the significance. The terminology, such as traditional, vernacular and indigenous settlements, recognises the unique context responsive design decisions, which have been manifested continuously by the communities. According to Rapoport (1991), the realisation of the built spaces is in coordination with the culture and cultural elements, creating a culture-specific built environment. However, the impact of globalisation and modernisation has posed a threat to the customs, practices and traditions. With changing time, the changing needs, values and socio-economic shifts encourage transformation of the continuous traditional built interventions (Rapoport, 1983). For the continuation of the practices, their transformation is to be incorporated in contemporary approaches and development processes (Oliver, 2006). As Khalaf says, the culturally and environmentally appropriate approaches are the key to sustainable futures.

“More recently, the cultural heritage field has been moving towards incorporating the time dimension in the definition of cultural heritage. It is the realisation that historic towns and urban areas, in addition to their material manifestation, are accumulated layers of social, cultural, economic and environmental constructs having tangible and intangible dimensions and are subject to constant change and evolution. Such a view expands the scope of our understanding of urban heritage.”

Khalaf, 2016:, 39

Similarly, Shah et al. argue that

“In Ahmedabad, the historic centre of the city has been experiencing ongoing challenges as a result of gentrification, modernisation, and shifts in urban dynamics. The conservation of built heritage has been impacted by various factors, including top-down interventions, limited community involvement, and urban expansion plans. Authenticity and sustainability of historic districts in evolving urban landscapes rely heavily on the significance of community involvement, local support, and well-balanced policy changes.

Shah et al.,2023: 447

Research Methods

The research undertaken has been done in three significant phases. The first phase involves secondary research and study of the archives. The field study is the primary source for establishing its geographical context, historic evolution, socio-cultural significance and architectural significance, conducted in the years 2019, 2023 and 2025. The establishment of the context became pivotal for identifying the values associated with each settlement from its part to the whole.

The field work at key historic towns of Gujarat has been conducted to inspect the traditional house forms, neighbourhood and settlement pattern. Historical and Archival maps are studied to narrate the morphological layers of the settlements. The archival maps are overlapped with satellite images to establish the relevance and significance of the physical form of the settlement in its existing state. The design elements, building material and construction technique, stylistic expression with changing rulers and dynasties are documented. The various layers of morphological evidence, like street patterns, built vs open, monuments, neighbourhoods, public squares, traditional house forms and their footprints, elements of space making, ornamentation and embellishments are documented in detail.

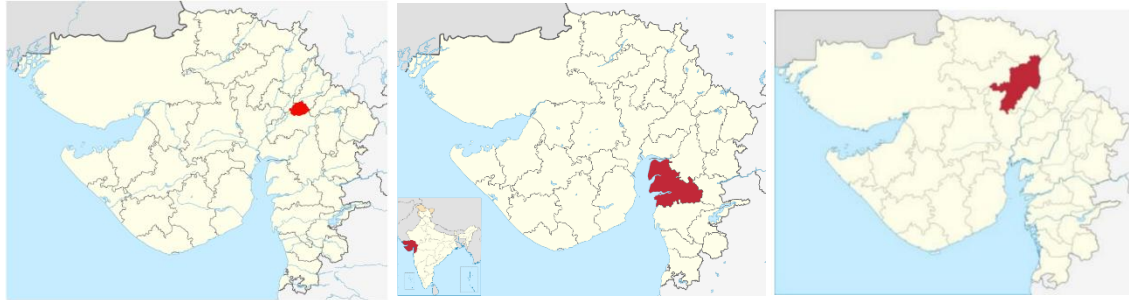


Fig. 1: Location of Kapadvanj, Bharuch and Vadnagar, State Gujarat, India
Source: Author

For all three locations, heritage precincts are studied, focusing on the aspects of change and continuity. Recording of the current state of the precincts is conducted through visual documentation. Figure 2 demonstrates the location and setting of Kapadvanj on the riverbank, the distinguished settlement pattern, the hierarchy of streets, the street network, and the remains of fort walls. The location of religious institutions in the vicinity of each neighbourhood is recorded. While recording the current state, the scale and proportion, attitude toward new building techniques, and pattern of change in land use are documented. During the field work, the ownership status and protection status are recorded to understand the current management of heritage sites. Further, the stakeholder consultation has been conducted to understand the changing needs of the inhabitants, their livelihood and the significance of heritage.



Fig. 2: Historic Settlement of Kapadvanj, with Identification of Traditional Neighbourhoods
Source: Author

The post-field work comprises the analysis of context, study of the existing situation, ongoing interventions and their impact on the traditional settlement. The comparative analysis of the current situation of the settlement with the archival images has been crucial for drawing parallels and deriving a pattern of change. As shown in Figure 3, the character of the spaces, nature of streets and density of the built forms have been analysed. All three settlements comprised the design features, ornamentation, and traditional design elements as shown in Figure 4. The elements are decorative columns, plinths, wooden doors and windows, balconies and eave boards. The current condition of these built forms has been documented and analysed to understand the transformation. The analysis has led to the identification of threats and opportunities for the heritage-centric development of heritage precincts. The study of the existing regulatory frameworks has been conducted to identify the current management systems.



Fig. 3: Relationship between Built and Open, Traditional Neighbourhood of Bharuch
Source: Author



Fig. 4: Typical Traditional Built Form of the Region
Source: Author

Findings

Encroachment

The monuments or shared spaces with no ownership are most vulnerable to encroachments. The evidence suggests that the unprotected sites that have remains and ruins from the earlier time periods have been neglected, and the same site has been used for the insertion of new institutional infrastructure. The current practices suggest that the regulation guidelines for management of the shared open spaces, unprotected sites and ruins should be designed and implemented.

Negligence and Lack of Maintenance

The migration is evident in all these towns, where the majority of the reasons are the search for better employment opportunities, higher education prospects for the children and livelihood. The study shows that the residences are either abandoned or rented out. There are locked properties in these settlements where the owners have not visited for more than five years. For the preservation of the traditional built forms, it is essential to keep them in use. Abandoned buildings are deteriorating and suffer from ageing, surface and structural cracks, water penetration, growth of vegetation and deterioration of the structure as a whole.

Building Interventions and Structural Impact

The selected regions mainly follow the shared wall construction technique. Therefore, the interventions to any given building are also impacting the structural integrity of the adjoining residences. These interventions have weakened the structure, and the instability poses a threat to risk during a disaster such as an earthquake.

Impact on the Historical Footprints

The local governing bodies are concerned about the monuments and institutions with religious significance. However, the traditional markets, streets, and residences lack attention. There is no existing legal framework to restrict the demolition of historic built forms and or the merging of the plots. In prominent cases, two adjoining properties have been converted into a single building. The loss of historicity of the land parcels is impacting the archaeological evidence. The current findings indicate urgent safeguarding of the unprotected heritage sites.

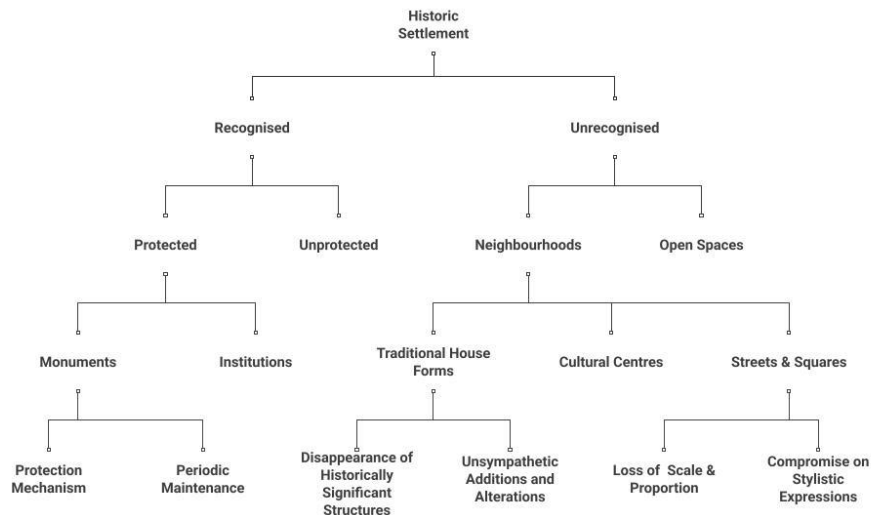


Fig. 5: Condition of the Unprotected Sites and Fragmented Morphological Elements
Source: Author

New Insertion and Context-less Expressions

The previously built traditional forms followed shared tenets, resulting in a harmonious street. The newly built forms neither follow the traditional materials and techniques nor do they have similar floor heights. In significant houses, the original structures comprising brick, stone and timber have been replaced with reinforced concrete. The previously built houses with ornate facades are being replaced with plain ones. Thus, the emerging built forms do not have a context-responsive approach, and the contrast is evident through the change in building height, form, material, construction technique and roofing style. Thus, the insensitive additions, alterations and modifications are threats to the authenticity associated with the spatial organisation, material, construction technique, and decorative features and design elements.

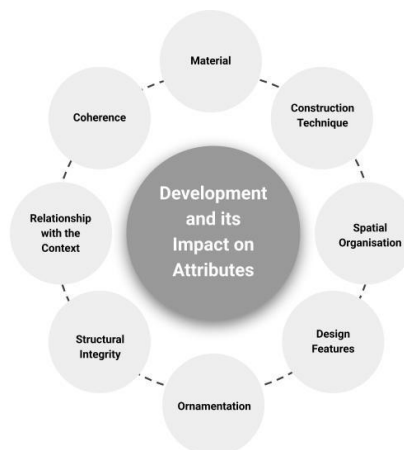


Fig. 6: Loss of Sense of Place in Traditional Settlement
Source: Author

Dynamics of Ownership and Conversion of the Land Use

Traditional houses have been passed down to the next generation in heritage, leading to multiple ownership. The division of property, migration of next generations and occupancy of owners and tenants create complexity for the management of the built form. As per the field data and consultation with the owners, it is clear that the above-mentioned dynamics lead to the conversion of land use, appropriation of the existing spaces, and transformation of the spatial organisation of the traditional house forms. The primary streets comprise mixed land use, where the ground floor is for commercial activity, and the upper one is for residential use. It has been observed that there is an ongoing practice of converting the land use from residential to commercial space. The shared image clearly demarcates the concentration of modified structures on the primary streets.

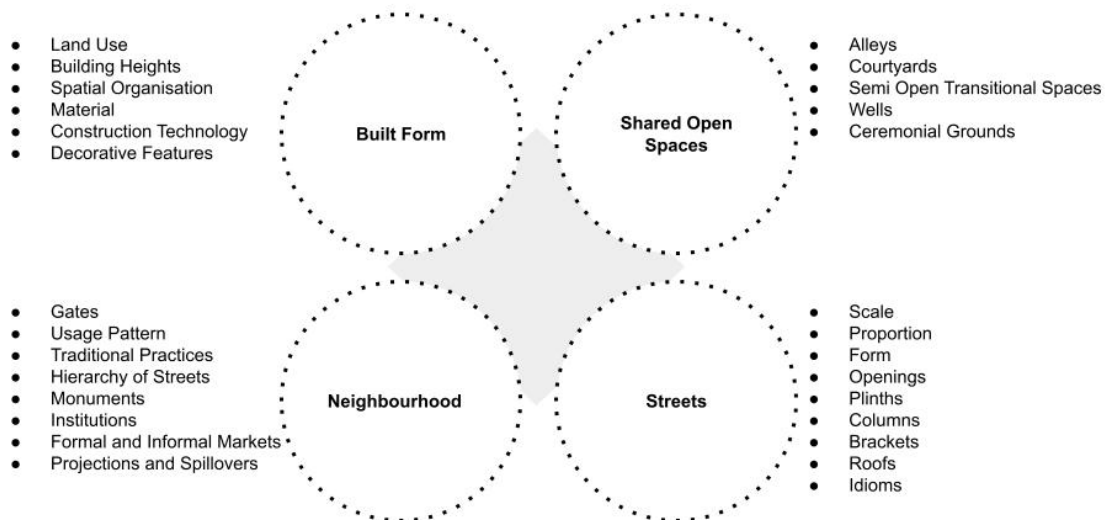


Fig. 7: Impact on the Attributes of Traditional Settlement

Source: Author

Urbanisation

Development activities such as road widening, public amenities and infrastructure pose a threat to the loss of historic built forms, precincts and their characteristics. The remains of fort walls, several gates, which used to be an integral part of the settlement pattern of the fortified town, have disappeared in the process of evolution. While the growth of the settlement is inevitable, the preservation of the morphology and distinguished features of the regional and cultural context is essential to preserve the successive evolution of the settlement. The loss of such historic components strongly advocates the derivation of mechanisms to protect and preserve them. Figure 7 identifies the key integral components of the traditional settlements of the region.

Transmission of the Traditional Building Knowledge Systems

The arrival of advancements in building construction techniques has accelerated building construction activities. The process has led to the decline of traditional and regional construction techniques. Over the years, the number of artisans and craftsmen with the knowledge and skills has also decreased. Evidences suggest that the gap in the transmission of traditional knowledge is increasing day by day.

The findings clearly demonstrate that there is a lack of awareness, recognition of the values and absence of a protection mechanism for heritage precincts. The repercussions are already visible in the form of the disappearance of several integral elements, such as fortification walls, gates, and traditional built forms.

Conclusions

The research reveals that the historic towns coming under the jurisdiction of the municipality have no defined rules, regulations and guidelines for the protection and management of the historic precincts. The loss of character (Fig. 8) with the disappearing morphological components, such as gates, remains of fort walls, historic plots, open spaces and built forms, is uncontrolled. The analysis indicates the outward growth of the towns, shifting away from the core of the settlement, is encouraging migration outside the city. The historic fabric is in urgent need of revival by a heritage-centric development approach to regulate the change and to retain the integrity of the rapidly transforming traditional setting. It thus concludes the following and suggests the potential approaches to be taken for conservation.

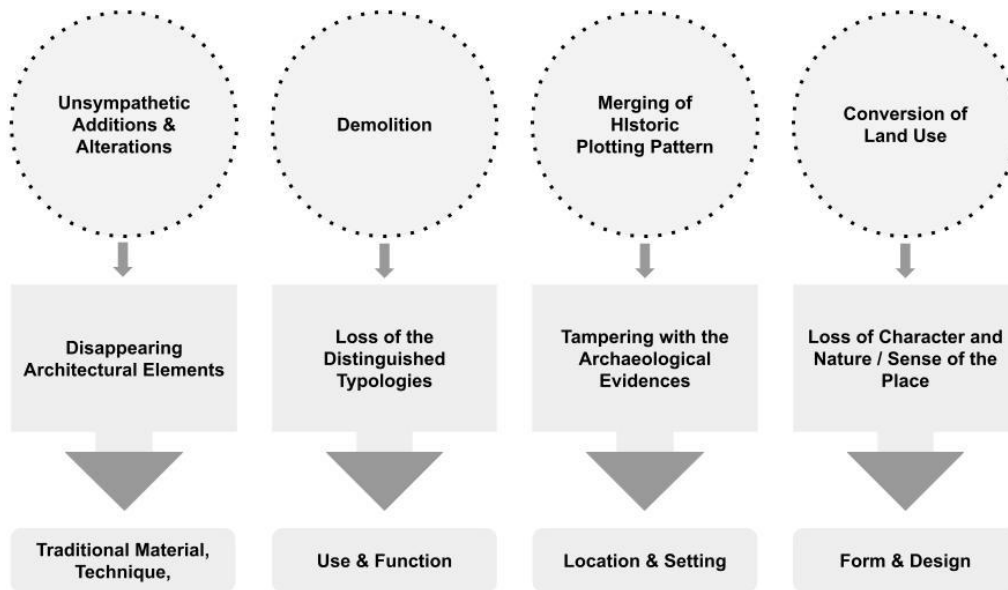


Fig. 8: Retaining Sense of Place by Addressing the Current Impact on Attributes
Source: Author

Process for Recognition of Heritage Precincts and Approach to their Management

The historically significant elements, precincts, streets, shared open spaces and built forms shall be listed and notified. The observations suggest that in the listing process, the historic built forms with poor conditions or with minimal articulations are not incorporated. There is a clear indication that the non-listed structures won't fall under jurisdiction, making them vulnerable to unsympathetic additions, alterations, and complete removal from their context. The study draws the need for declaring historically significant precincts.

Gaps in Existing Schemes

The existing scheme, such as *Pradhanmantri Aavas Yojana*, provides financial assistance to the owners to build *pakka* houses. The initiative empowers the needy communities; however, the lack of provision to repair historic structures leads to complete demolition of the old building, as replacing the brick, wood and timber-built forms with new materials is evident. Such gaps in existing schemes need to be addressed.

Protection and Management

For the core walled city areas, the jurisdiction department needs to establish a heritage cell for documentation, identification, protection and management of the heritage precincts. The stakeholders, decision makers, owners, and users shall be part of the process.

Development Guidelines

The Guidelines have no emphasis on the importance and preservation of the historic precincts. The guidelines need to be revised for defining methods, approaches, and actions to be taken in and around the heritage precinct with authenticity and sensitivity. Actions such as land use conversion and merging of plot boundaries are to be regulated. The vacant plots and shared open spaces must be protected from encroachment and revived with adaptive reuses with minimal built additions. Thus, the absence of regulatory frameworks and their implementation is the biggest gap for uncontrolled transformations of historic neighbourhoods.

Heritage Impact Assessment

The Management of the core walled city and the peripheral spaces needs to be monitored. The proposal of new projects needs to undertake heritage impact assessment to evaluate the impact of the new development on the values associated with the historic precinct. The nature of the space, the functions to be incorporated, and its impact on the existing users of the space shall be detailed. The new development should respect the values associated with the site and must not adversely impact the attributes.

Guidelines for Modifications

The historic structures undergo several layers of interventions. The significance of material, technology, and spatial organisation shall be protected. Only retaining the facade and renewing the internal spaces does not preserve the built form as a whole. The ongoing interventions are unsympathetic and not bound by regulations. The manual for specifications, design details, and approaches to repair must be provided, and capacity-building programs must be conducted for the city engineers. The city engineers shall be given the responsibility of the coordinator, and counselling should be provided to the inhabitants to provide appropriate guidance. The guidelines shall create provision for the maximum height to be availed, as the traditional fabric's visual integrity is compromised by the newer Ground + four-storey building forms.

Abandoned Institutional Buildings

The practice of abandoning the institutional and administrative buildings and relocating to newly constructed buildings have led to the neglect of the old buildings. Before the relocation of functions, the sympathetic adaptive reuse is to be assigned, and relevant steps are to be taken by local bodies to regenerate the historic fabric with contextual approaches.

Knowledge Transmission

It is proposed that the traditional craftsmen should be revitalised, and the transmission of the knowledge shall be ensured by the creation of skill-building organisations that will also provide employment generation opportunities.

Integration of the Contemporary Functions with Heritage Setting

The closely built historic settlements of the selected cases indicate the need to design the open spaces suitable for the youth, children and elderly. The vacant plots, demolished and neglected sites, are to be revitalised with added value.

The monuments are in ruinous condition. The walls and gates are to be conserved, and the buffer of the monument is to be designated and incorporated for activities such as heritage walk gathering points, for conducting street plays. The step wells, which are unique water structures and significant in this region due to water scarcity and hot and dry climatic conditions, need to be restored. The availability of a source of water at every doorstep has made the shared water bodies and amenities abandoned. The vandalism of the place leads to unhealthy conditions of the water body, making it unusable. State-protected monuments are well maintained, while the unprotected step wells are threatened by the accumulation of debris.

The design of the development strategy shall take into account various factors such as the nature of the place, socio-cultural significance, authenticity with the identified attributes and renewed interest of the site for current needs. Comparative analysis indicates the dynamic challenges of intervening in the existing living heritage sites and achieving a balance between new developments and conservation of the heritage at the same time. The deterioration of the heritage precinct should be revived by designing opportunities for community engagement and collaborative approaches between stakeholders.

The revival of heritage sites with a public-private partnership can open up new opportunities for associations with the place, employment opportunities and a source of income generation and most importantly, the heritage site can be revived with enhanced, contextual and renewed interest. The approach will become a catalyst to retain values, continuing traditional practices and establishing relevance by adding meaning to the existing fabric with renewed context-sensitive design interventions, keeping the sense of place intact.

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Conflict of Interest: It is declared that the implementation of this study does not involve any conflict of interest.

Ethical Practice: This research has been conducted employing accepted ethical research practices and does not violate the rights of any social group, a person or animals. The data was generated with a full understanding and agreement of the respondents, and owners of the case studies.

Availability of Data: The author declares that the data used in this study are available for verification upon request.

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