

CONTEMPORARY CHALLENGE IN RETAINING OLD-BUILT FABRIC – CASE OF MITRA BARI, KOLKATA

Dr Arpan Dasgupta*¹ Ar. Teesha Majumder *²

*¹ Associate Professor, Amity School of Architecture & Planning, Amity University, Kolkata, India.

*² Assistant Professor, Symbiosis Skill and Professional University, Pune, India.

Abstract -

Kolkata has been a witness to some sea saw transformation in terms of its urban growth especially in the last 15 years. Rural-to-urban migration has been at an all-time high, resulting in an unplanned sprawl destabilizing almost all the desirable limits of an ideal urban setting. The city responded uniquely to these changing needs but has lost a remarkable bit of its glory and uniqueness in the process. In the present context, Kolkata has witnessed a sharp decline in retaining the quality of urban fabric for which it was known for. This has especially degraded the historic urban built landscape (HUBL) created by previous generations. Altering the morphology of architectural built heritage doesn't help and has impacted Kolkata, notably the northern section of the city. This has ensured a revised look and loss of characters of the streets as well. The deviations of traditional and distinctive architectural styles, variations to street elevations, disruptions to the street setting, and degradation of historical identity are common stories. It is important to use historic landscape management as a tool to conserve cities' heritage and achieve a sustainable balance between urban expansion and quality of urban life retaining the historical identity. This paper is an effort towards understanding this change through the historic Mitra Bari (Mansion), where a section of the property has been reconstructed into a contemporary apartment building and the mansion has been taken care of in bits and pieces. The Mitra Bari stands as an example that has been a typical story of the historic urban built landscape (HUBL) in north Kolkata. The study shows that steady and sensitive modification is the response to the changing contemporary needs through the illustration of the Mitra mansion showing architectural legacy of the structure. The study further discusses the problems of conservation and possibilities to retain such heritage buildings that can ensure the uniqueness and identity of the North Kolkata neighbourhood.

Keywords – Urbanization, Rural-to-urban migration, unplanned sprawl, historic urban built landscape (HUBL), landscape management, conservation, old properties

Introduction -

Architectural conservation and heritage management are essential practices that aim to preserve and restrict the amount of change especially in an urban set up. These practices involve the identification, documentation, protection, and restoration of buildings that hold significant value to a community or society. Every city has a unique past, and Kolkata is no exception. This bustling metropolis is rich in history, arts, architecture, and culture. The old architectural brilliance of the city is indicative of the character of the city. Urbanization, economic globalization, and technological innovation have manifested in structures and promoted the expansion of Kolkata. As a result, there is this change in morphology. Also, the Socio-economic system has experienced a remarkable and extensive change, with substantial change in construction and real estate markets. When one thinks about Kolkata's architectural legacy, users tend to envision the historic urban scape of north Kolkata, considered to be the result of a historical layering of cultural and natural values. The conservation involves preserving the physical fabric of the urban built forms while maintaining its historical integrity. The significance of the traditional urban landscapes, which were weaved 300 years ago, is either being destroyed or is in the process of remodelling in the face of contemporary demands.

The heritage building of Mitra Bari (Zamindar Bari) is one such property in North Kolkata with historic precincts, and cultural layers attached with it. The building failed to retain its individuality in the face of changing urban context. The built environment of north Kolkata, together with its infrastructures, open spaces, land use patterns and visual linkages, pertain to its uniqueness and individuality.

Kevin Lynch asserts that historical events have a significant influence on how cities are perceived and built both physically and conceptually. The consequences of specific events could create, retain, and even transform the meaning of this conceptual framework. To conserve and manage these heritage properties a broader framework and a comprehensive integrated strategy is now required. There can be different approaches, concepts, methods, and measures to describe the significance of the historic urban built landscape (HUBL) in relation to physical, functional, and social processes. In simple words, to preserve urban liveability and counter the development challenges, and preserve historical monuments - it will be essential to identify new paradigms that explain new policies.

Aim -

Countering the challenges in conserving Kolkata's architectural past and the need for historic landscape management through the study of transformation of Mitra mansion.

Objectives -

- Aligning the Kolkata morphology and its subsequent evolution.
- Understanding Historic Urban Built Landscape (HUBL) of Kolkata.
- Analysing and mapping the quality and condition of the Mitra mansion.
- Observing the need for heritage management amidst contemporary challenges.

Morphological Evolution of Kolkata –

To understand and manage the historic urban built landscape of Kolkata (HUBL), some methods and concepts of town plan analysis and space syntax need to be applied to the city's historic core. The city of Kolkata had come into existence after many layers of continuous alterations of the significant heritage-built forms, street network, structures, and land use distribution over time. To explore the change in the city's historic urban built landscape, (HUBL) it is essential to comprehend the evolution of the city. Historical built forms with heritage values are interpretations of the magnificent image of Kolkata. It forges a relationship between place, history, culture, and users. The existing morphology of Kolkata emerges from the three hamlet settlements of Sutanuti, Kalikata, and Gobindapur connected by a central axis called Chitpur road.

The morphological evolution of the city from 1690 till 2000 is shown in the map (Fig -2), but with the European invasion, the city had a structural design revolution as well. The architectural design ideation and the start of planning modification led to the development of palatial architecture with articulated spaces. Use of the different columns, courtyards, and linear corridors are some of the design styles which came into the picture at this time. Side by side with its many imposing public buildings, many palatial villas were built far out in suburbs like Chowringhee, Baliganj, Rasa Pagla (Tollyganj), Garden Reach, and Chitpur by the English. Areas like Chowringhee were dominated by the English, while the Chitpur area was dominated by the natives - as a result there has been a significant increase in building density in a few parts of the city. Besides residential and monumental public buildings, a wide variety of religious structures, public and private memorials, and educational and cultural institutions were also built in Colonial Kolkata, contributing to a variety of built heritage. Hence different areas of the city grew with the historic urban built landscapes.

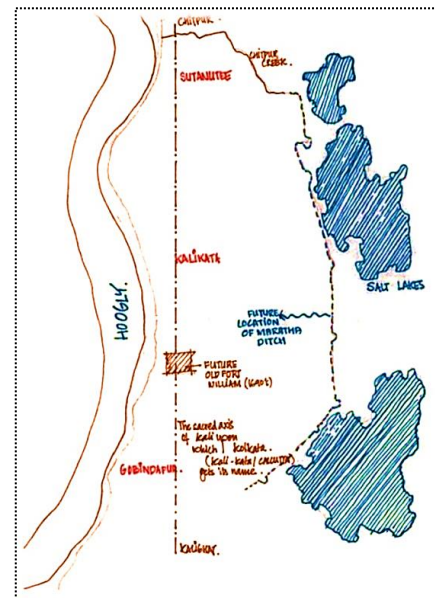


Fig. Map of Kolkata showing

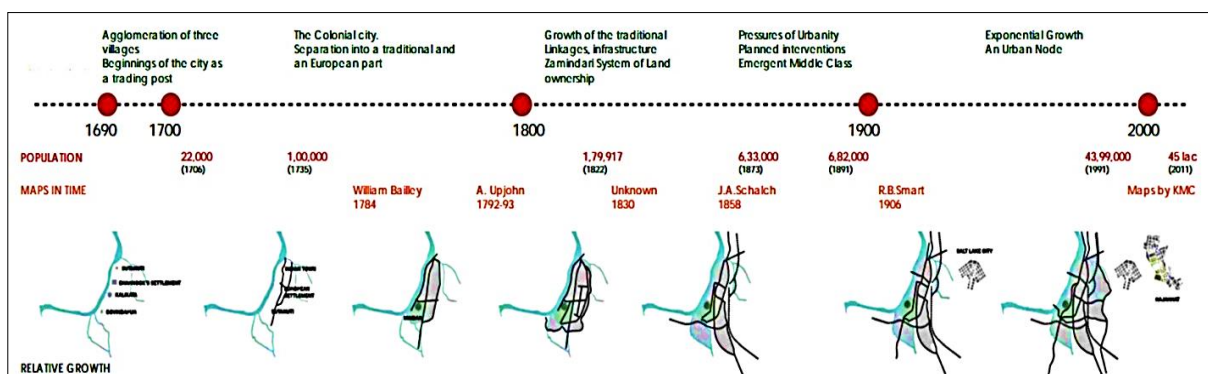


Fig. Map showing relative growth of Calcutta from the year 1690-2011.

Perception of HUBL of Kolkata –

Kolkata's HUBL (historical urban built landscape) consists of buildings, streets, and land uses that represent its way of life. But the city is facing challenges due to its complicated urban and morphological changes. The heritage buildings and land use of the city are continuously altering their character at differential rates in the face of ever-changing functional needs of society. It is possible to analyse Kolkata's HUBL by utilizing methods that relate to each other like heritage building analysis, town planning assessment, and space syntax tabulation. The buildings that have been designated as having heritage significance have a particularly distinctive spatial relationship with the neighbourhood's external setting, which includes the streets, neighbouring structures, and neighbourhood users. The associations between the forms and functions of the urban environment have been described and interpreted through space syntax in an array of traditional works on urban morphology. Consequently, the fundamental link between space syntax analysis and town plan analysis is the 'heritage building analysis' which gives an in-depth inspection of architectural forms with heritage value. The term heritage building analysis refers to a design investigation of the socio-functional aspect of historical structures that integrate with the surrounding urban fabric. This paper will investigate these historically established structures that contribute to the urban fabric and are essential to the city's identity and will also identify the challenges involved with conserving the historic built forms and settings of the city of Kolkata.

Story and Transformation of Mitra Mansion -

The Mitra residence, with a 216-year history, is among the most significant and socially prominent buildings in the Darjipara district, with a rich architectural inheritance, cultural history, and ethos. It is located at the intersection of two ancient avenues, Beadon Row and Nilmoni Sarkar Street. The Mitra family, who are descended from Radhakrishna Mitra - a wealthy merchant who rose to the position of Zamindar (landlord) of certain regions of British-ruled north Kolkata, currently possess the residence. The mansions architectural splendor represented the European and Indian Neo-classical styles with socio cultural interactions. The original and present day arrangements shows that a significant portion has changed and has been adapted to an entirely different built-form typology which no longer resembles the original Mitra Mansion.

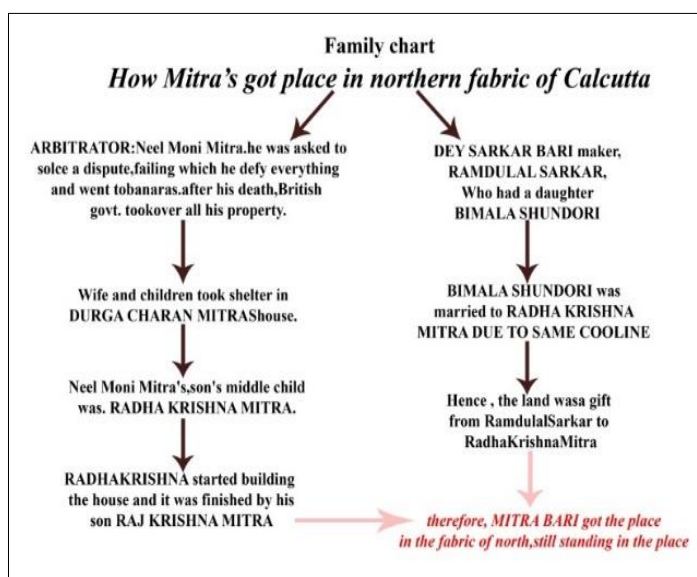


Fig. Establishment of Mitra family



Fig. Original and Present-day building footprint of the residence

The Mitra residence is cited as an example in this paper in order to comprehend the evolution of heritage buildings that integrate with the surrounding urban fabric and explore the impact of their abrupt transformation on the neighbourhood of north Kolkata. The layout of Mitra Mansion of Darjipara was meticulously organized, with both private and public spaces segregated in accordance with the various activities that would take place.

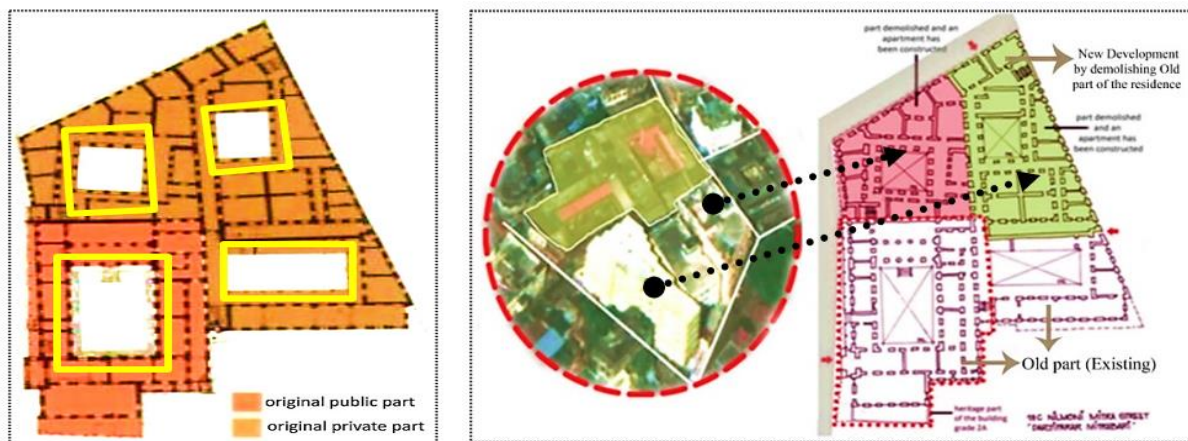


Fig. Public & Pvt space Mitra residence. Fig. Showing Existing and newly developed parts of Mitra residence.

As illustrated, the original property parcel was essentially divided into four spacious areas, each containing a central courtyard and rooms with flowing verandahs and balconies facing the courtyard. At present, the property has been altered into a contemporary structure on more than half of the land. Previously the mansions were utilized as a single residential property, but the present portion of the plot of land has been replaced by two high-rise condominium developments designed in a contemporary style, without any concern to the cultural and architectural legacy of Mitra's residence. The city's historic urban built landscapes (HUBL) have been compromised due to the indiscriminate dismantling and complete reconfiguration of portions of palatial structures.

Heritage-built analysis of Mitra mansion

The Mitra residence's design was based on a usual type of construction with a load-bearing structural system. With verandas and balcony in the form of a circulation corridor overlooking

the central courtyard, the residential rooms are arranged surrounding the same. A massive single-story ornate temple known as Nat-Mandir or Thakur Dalan with community space is located at the end of the main courtyard which is connected to the building's entrance.

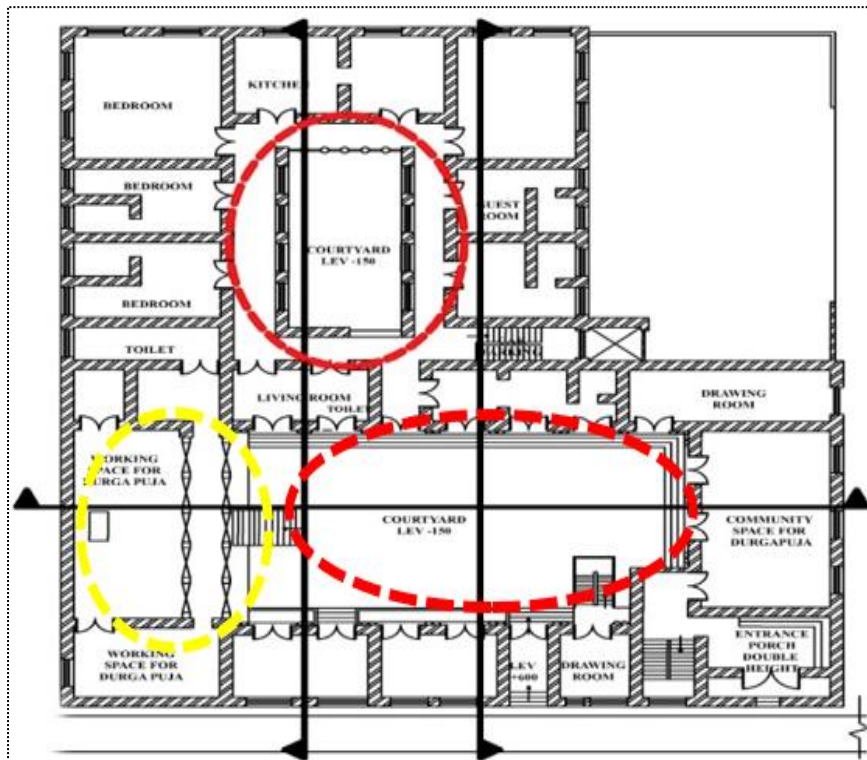


Fig. Ground floor plan with courtyard, and thakur dalan



Fig. Existing courtyard, and thakur dalan of Mitra residence



Fig. Previous water body, now backward courtyard, of Mitra residence

There were four courtyards with a water body but due to modifications and present needs, only two courtyards remain with no existence of other water bodies. Mansion is a two-story structure with linear, continuous Verandas around a central courtyard. During religious ceremonies and social gatherings, the courtyard of the mansion functions as an informal gathering space for the neighbourhood's residents and guests. Hence it is understood that the interior spaces of the residences in North Kolkata have been planned with the idea that they could function as a unifying force for all the neighbourhood while additionally supplying natural light and ventilation to the nearby rooms.

The veranda around the courtyards provides natural light and ventilation to the parallel rooms on their first and second floors. At Mitra mansion the specifics of the space layout did not adhere to actual European aspects, but rather to Hindu architecture from north India, such as Rajasthan, Islamic conventional planning procedures, or entirely native Bengali forms. For instance, a temple at the other end of the courtyard is never an expression of Europe. These types of heritage structures were referred to as "indigenous" and 'Bengal Baroque' by art historians, critics, and commoners because of their distinctive conceptualization of space approaches. The residence has a raised plinth over a low-height basement (part of an arched foundation) to pass air through it to retard rising dampness at the superstructure and that provides the basement below the Nat mandir with 4 rooms that were used for the preparation of food and allied activities pertaining to religious festivals. Women were not allowed to reach men except for their spouses or closest relatives till late 19th century - they were hidden by a veil or curtain. So additional courtyards and water body have been set at the rear spaces for in-house women, servants, and other workers. Construction techniques at this heritage residence were very simple but magnificent.

Bricks used for construction were standard rectangular bricks (250×125×75 mm), with ornamentation made by corbelling and expert craftsmanship. Lime, sand, and brick dust along with some other pozzolanic materials were used as mortar. The substructure of the building is made up of stepped brick foundations or arches, while the superstructure is made up of thick walls at least 550mm wide. The exterior façade has verandas decorated by arches and columns of cast iron which has intricate ornamentation and motifs.



Fig.13: Continuous Veranda



Fig.14: Straight Veranda on 1st floor



Fig.15: Rooms below Nat mandir.



Fig.16: Exterior Veranda

Other features the mansion had -

- simple columns for the interior Veranda,
- solid brick walls for the rooms,
- arched doors, windows,
- wide entry openings,
- considerable room height,
- timber beams, rafters,
- iron joists and tees,
- lime terracing on the roof,
- floors made of terracotta tiles and lime concrete, and
- ornamented parapets.

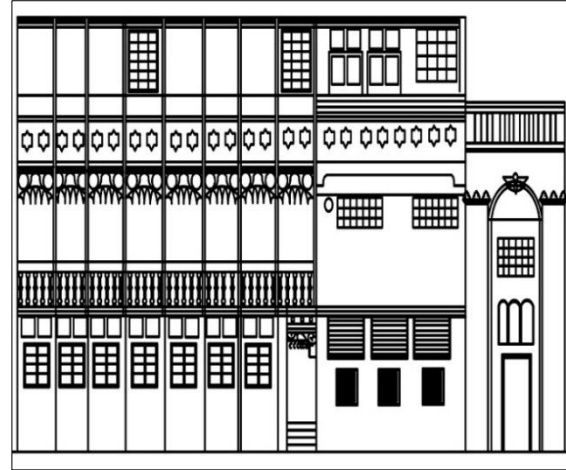


Fig.17: Front elevation of Mitra residence

The styles of the circular columns were Tuscan, Doric, Ionic, Corinthian, or mixed in characters. The staircases tread and the riser were made of wood, cast iron for the waist slab, and timber design work for the railings. Mitra mansion is an exceptional piece of architecture that contributes to the heritage urban built landscape (HUBL) in the Darjipara neighbourhood. The building stands out as graceful landmarks and impart a sense of place and identity to the city.



Fig. Sudden alteration in old part of Mitra Bari

However, the beautiful mansion could not survive the backlash of urbanization. Additions of Contemporary-style apartments due to continuous real estate development. Other reasons being inescapable circumstances encountered by the owners of Mitra mansion. The building's radical transformation skews the structure's overall appearance (interior, exterior) and layout. The sudden subtraction of social spaces within the structure has a substantial effect on the neighbourhood's identity. The inventiveness of the palatial residences of Darjipara is gradually disappearing and going by the pattern, they will be completely vanishing in the next ten years.

Challenges in Conservation -

Mitra Mansion's heritage building analysis has given testament that the city has a substantial architectural legacy. However, a lot of these opulent mansions and their surrounding neighbourhoods are in jeopardy owing to abandonment, deterioration, and demolition. The city's identity will be totally altered by the constant hammering of these decrepit structures. Conservation of Kolkata's unique architectural history is crucial considering extra perks in attracting tourists and bolstering the local economy. Identifying and mapping these historic palatial residences is the first step towards conserving them.

The KMC updated Building Rule 425(A-P) in the late 1990s and early 2000s to address the preservation and protection of historic structures. Following this, the KMC established the

grade of heritage buildings, provided a list of these structures in Kolkata, and, using the authority of Building Rule 401, prohibited the demolition of any recognised or listed heritage structure in the city through its publication in February 2009 (KMC 2009). However, there are significant issues, which are potentially causing complications in conserving and contributing to the difficult and inappropriate management of these historic buildings.

- **Inadequate funding:** Conserving historic structures is an expensive endeavour, and often the government lacks sufficient funds to support it. Sometimes the owners lack sufficient funds to restore and modify those properties architecturally.
- **Insufficient insight:** Present owners (5th to 7th generations from original) portray an absence of a sense of belongingness and relevance of buildings. As a result, several structures have suffered alterations or been demolished due to their sheer ignorance.
- **Privacy and space crunch:** The inclination to demolish or remodel older residences is supported by the simple realities that they usually fail to provide adequate space for the concept for the modern day's nuclear family structure.
- **Real Estate boom:** Construction boom in Kolkata, coupled with astronomical rise in property values, has led to rising urge among owners of historically significant properties like Mitra mansion to engage in negotiations with developers.
- **Ownership and Tenancy:** Most old buildings have multiple owners and tenants, and their frequent legal hassles amounts to drag on for generations without being resolved, so there is a natural lack in the knack of taking care of the property.
- **Ineffective laws:** Legally safeguarding historical assets is not the easiest. There are regulations in existence for safeguarding heritage buildings, but norms are frequently flouted. Corruption, awareness, and a lack of resources are a few reasons.
- **Tax and rent:** Municipal taxes have significantly increased over the time, whereas tenants continue to pay the most affordable rents which is not raised in decades. Sometimes owners adopt rent control measures to resolve legal disputes with tenants.
- **Lack of cohesion:** Multiple organisations overseeing conservation of historic structure often fail to collaborate collectively resulting in conflicting priorities. Implementing efficient conservation strategies has become exceedingly difficult as a result.
- **Dearth of skilled labour:** In the present situation due to much less appreciation and actual work done – to find or procure labourers, masons adequately trained in old traditional construction methods are increasingly difficult.
- **Narrow lanes:** Inadequate approach roads, for vehicular traffic movement push the inhabitants towards a negative mindset for construction. This also makes the aspirations of modern and urban living more challenging in urban areas.
- **Slum encroachment:** Slums and squatters are common feature especially in and around old properties in north Kolkata – They occupy a substantial space, as a result, it becomes a further hindrance and a challenge to access and maintain these structures.

Building Industry Situation, Kolkata –

Kolkata witnessed an economic boom from late 90's. Conflict arose due to city's need for physical and infrastructure development to address the same on one hand and the need for conservation of dilapidated, and neglected heritage buildings, and precincts on the other.

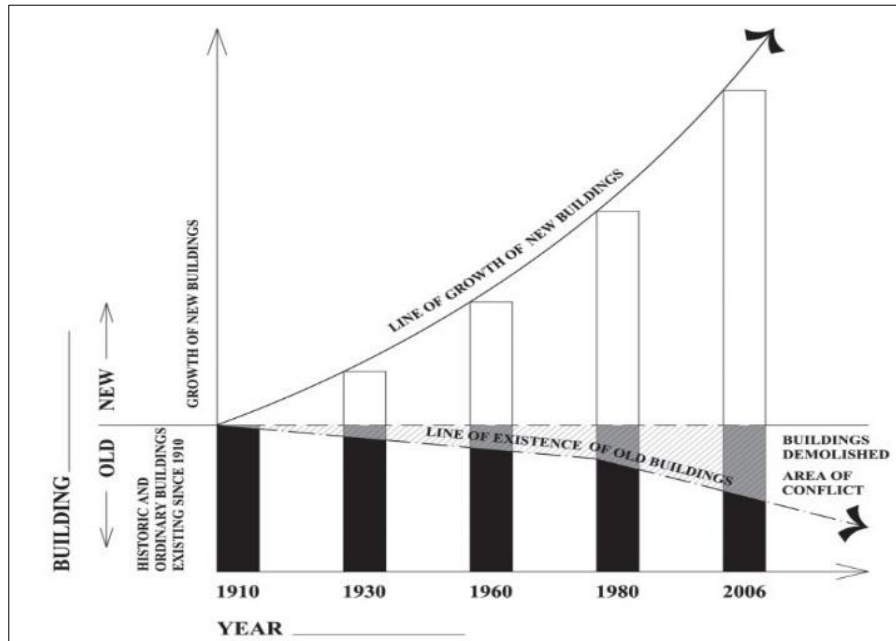


Fig. 19: Schematic graph showing the rate of demolition of old buildings, growth of new buildings, and the area of conflict / under threat. (Source: Bose 2008)

Year (April to March)	Total Floor Area Sanctioned for New Construction / Addition-Alt. (in sq m)	Total Number of Buildings Sanctioned	Number of Buildings Sanctioned above 5 floors up to 60 floors (building height > 15.5m)	Number of Residential Buildings Sanctioned	Number of Other Buildings Sanctioned
2005–2006	1928229.828 / 131947.945	4160	73	4119	41
2006–2007	1859028.319 / 203637.103	3324	70	3268	56
2007–2008	1456947.174 / 70204.798	2893	69	2850	43
2008–2009	1779467.221 / 211986.722	3668	64	3614	54
2009–2010	1724949.781 / 94327.265	3774	80	3718	56
2010–2011	2118287.759 / 256052.29	3903	110	3849	54
2011–2012	2032544.880 / 97170.636	3608	171	3535	73
2012–2013	2083464.940 / 329446.134	4511	160	4442	69
2013–2014	1988728.741 / 241756.234	4397	116	4339	58

Tab.1: Rate of Construction of Buildings in KMC Area 2005-2014 (Source: S. Banerjee, Deputy Manager of Systems, Kolkata Municipal Corporation, 2014)

As a result of Kolkata's substantial boost in urbanization since the 1990s, as shown in (Fig. 19) the age-old historical and traditional structures, settings, and open spaces have been categorically demolished and started disappearing from the setting. The number of newly approved developments sanctioned by the KMC for development between April 2005 and March 2014 is 34,238, out of which 913 includes a minimum of five floors, while others go up to 60 floors. (Table 1). Recently in Kolkata residential property registrations in January 2023,

marked an overwhelming 75% growth in comparison, there were 47,317 in the previous 18 months (January 2020 to June 2021) – an increase of 70%.

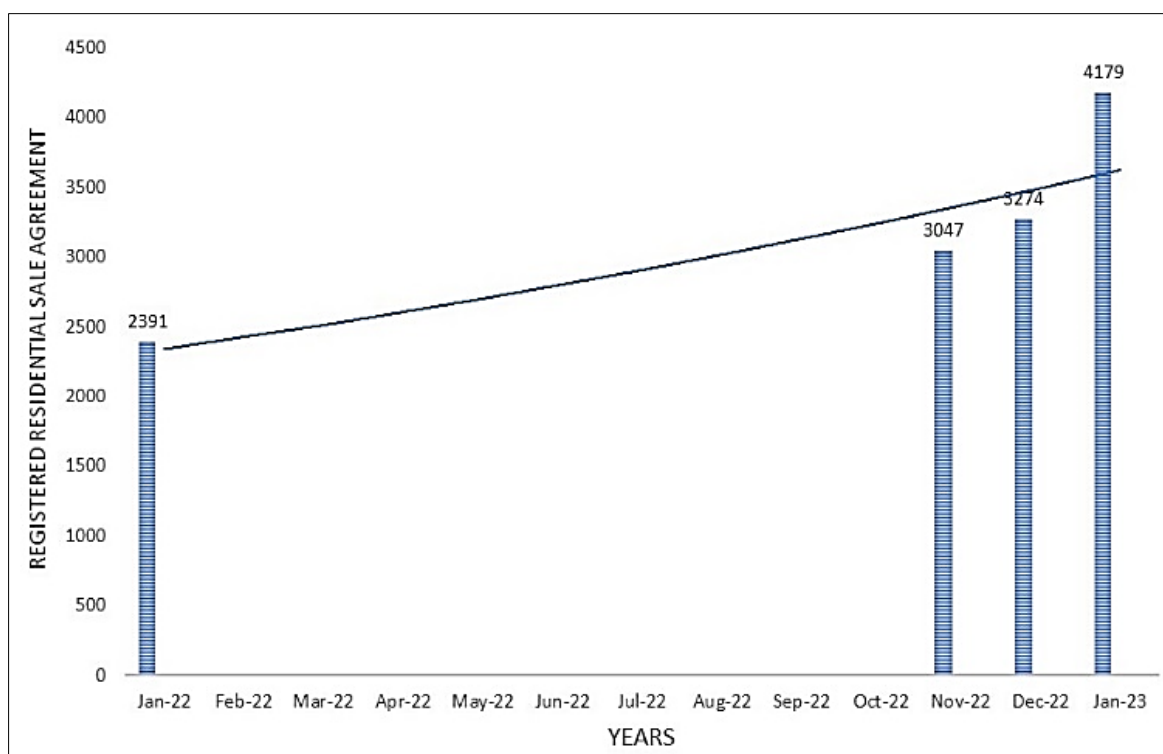


Fig. Schematic graph showing the rate of registered residential sale agreements
(Source: TOI, Feb 23, 2023)

The Schematic graph shows that there is a significant urban transformation taking over the built environment of the city – the registered sale deeds year wise. So, most of the fresh construction is accomplished by eliminating older structures. The administration of Kolkata and the city's diverse society lack the determination to incorporate architectural and urban conservation into the implementation of planning policy and ensure a holistic growth of city. Although market factors cannot be ignored, conservation should be a component of urbanisation to safeguard the present heritage buildings like the Mitra mansion as discussed in this paper to avoid the authenticity loss of traditional characteristics and physical settings of the city's uncontrolled and incompatible additions to historic buildings.

Possible Outcomes -

To ensure that Kolkata's architectural history remains intact for future generations, both heritage conservation and heritage management play essential roles. Despite its social problems and physical environment that deteriorates steadily, Kolkata retains its old ethnic charm in many ways. To make sure that the city does not lose out on its existing physical built forms - conservation and management of its heritage properties like Mitra mansion remains a foremost priority. A few possibilities after a micro level intervention of Mitra Mansion -

- It is important to collaborate with government agencies, commercial enterprises, and neighbourhood communities to develop heritage management strategies for preserving old buildings of North Kolkata neighbourhoods.

- The government must establish heritage management committee, who will take ‘Case Specific’ decisions - preventing total demolition and exclusion of details of ancestral private residences with cultural significance.
- Guidelines must be developed for any alterations or changes to historic buildings so that existing structures gets skilful retrofitting to make them more adaptable and futuristic. So, we can foster tourist and educational opportunities.
- To safeguard, maintain, restore, and transform old buildings while mitigating issues like rainwater infiltration, poor airflow, structural deterioration, infrastructure degradation, and other physical variables needs to be taken care of with new technology.
- Expanding traffic routes or creating other essential facilities with contemporary applications to be sensibly implemented with close monitoring by technical persons in such historical neighbourhoods and ensure minimum forceful alterations.
- Examination of urban morphology, property management, frequent inspections and a robust maintenance strategy, modest rehabilitation plans, and discussion with residents should all be included in the management of historic urban areas.
- Conservation activity requires funding - for quality improvement of old, existing building with a projected useful life of 40 years costs about 48% of the cost of a new building of the same area and volume. Adequate funds need to be procured.
- Involvement the skill of local labours and technologies sets the difference. Using local know how can be economical, often costing only two-thirds of new buildings of the same area and saving the cost of renewing the infrastructure.
- Conservation for adaptive application by adopting new know how’s holds the key to successful revival of heritage structures of North Kolkata – enhancing the surrounding environment while retaining the cultural expression of the community.

One of the very interesting examples of conservation management is the urban conservation management of Rome where its medieval core has been designated a World Heritage City. Governed by the master plan, the essence of historical Rome always remains present - A central core in North Kolkata can be developed like Rome. The design of any new development must help to preserve and enhance the traditional character of the ‘Age-old neighbourhood Place’. The features of Built structures convey an accurate rendition of the entire neighbourhood. Recommendations for the conservation of private historical residential buildings in the Age-old neighbourhood of Kolkata should include:

1. Repairing facades elements without deviating from the original design – i.e., renovating considering the building’s old architectural style and features.
2. Correcting physical appearance by removing obstructions, enforced additions and disruptive features like ugly façade treatments, and unsuitable advertisement hoardings.
3. In the case of contemporary development on the same parcel of land, the façade design must appreciate the façade details of the old structure.
4. Preserve the ‘sense of place’ - the new structure must hold to similar design, construction details, materials, and other features of the previous structure.
5. Improving the sidewalks, adding, or upgrading street furniture, ornamented streetscapes and incorporating landscaping components that will create the ambiance of the place.

6. Establishing special building bylaws for historic areas which will allow contemporary construction with regulation of height, compatible architectural style.
7. In case of public building, mandatory incorporation of barrier free elements like ramps, handrails, signages etc - they should be sensibly incorporated.
8. Educate children at school level regarding the importance of these buildings – the history and stories embedded with these buildings and streets – proper grooming would allow next generation to think rationally and stop them from taking radical steps.
9. Physical visits to these lanes and buildings at school level should be mandatory as part of the curriculum. This would also induce a sense of attachment and belongingness of the new generation to the city, its history and culture.

Concluding Discussions -

Understanding Kolkata's original urban vision, which relates to the city's foundation, sensitively is of the utmost importance. North Kolkata's heritage structures, whether they are privately owned or public properties, shouldn't be easily dismantled since they reflect where the city emerged from. If skyscrapers with the same architectural approach and perspectives were to replace them, every city would resemble each other. As a result, cities with distinct characteristics are to be retained. The measures suggested in this paper are in lieu of the same. Like Mitra's mansion, there are numerous further structures in the same vicinity that demand conservation consideration. Likewise, there are numerous additional areas in north Kolkata that demand immediate intervention. As discussed, and suggested, like urban conservation management of Rome, similarly the conservation principles of north Kolkata must be formulated by the Kolkata Municipal Corporation and included in the master plan so that the historical core of the city retains its attraction.

Kolkata Municipal Corporation is currently investigating the potential of expanding the scope of the historical conservation from buildings to encompass entire neighbourhoods. Some heritage structures in Kolkata were listed by KMC twenty years ago. The heritage tag of 400 odd buildings is pending. It is now necessary to create regulations and statutes that will define heritage buildings and precincts and preserve their architectural character. "Appropriate architectural and historical neighbourhood conservation" along with HUBL methods can be adopted as an approach to the specific issues of respective historic precincts. The management and planning strategy on removal of contradictory elements, restrictions on the proposed height and character of new buildings, limitations with clear boundaries to be incorporated and implemented.

Lastly, it is important to raise awareness about urban heritage building conservation so that it may adjust to the changing urban growth scenario. For the shared goals of heritage management and heritage building conservation in Kolkata to be achieved, there must be an efficient collaboration between the various departments of the state government and the municipal authority, as well as public engagement and real estate cooperation.

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