ARCHIVING BETILA - A Study on the Present Condition and the Architectural Features of an Evanescing Historic Settlement

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ABSTRACT

Betila, a heritage settlement in Manikganj, Bangladesh, is home to a remarkable row of courtyard and bugalow type houses built during the British Colonial period. This settlement, established by elite Hindu merchants near the Kaliganga River, represents a unique architectural fusion of British Colonial and Mughal styles, adapted to the local context and spatial configurations. The buildings, characterized by their intricate design and historical significance, are now at risk due to illegal encroachments, neglect, and the pressure for modern urban development. Following the Partition of Bengal at 1947, the settlement has faced severe deterioration, with many of its structures now under threat of demolition to make way for multi-storied buildings. Despite its cultural and historical importance, Betila remains largely unrecognized by scholars and policymakers, leading to a rapid loss of its architectural heritage. This paper aims to document and assess the architectural features, spatial layout, and current condition of Betila, providing a comprehensive overview of its historical context and significance. Through careful documentation, this research intends to highlight the urgent need for conservation and the re-evaluation of the site's potential for adaptive reuse. By exploring the fusion of colonial and Mughal architecture and the spatial relationships of the buildings with the surrounding environment, the study offers a framework for future conservation strategies. Ultimately, this research advocates for the preservation of Betila as a living heritage site, emphasizing the importance of safeguarding this historic settlement for future generations.

Keywords: Betila, Built Heritage, Historical Settlement, Documentation, Condition Assessment, Photogrammetry, Conservation Planning, South Asia.

INTRODUCTION

Bangladesh is a nation steeped in history, with a rich tapestry of architectural landmarks that chronicle the evolution of its culture, society, and economy. Among these, colonial-era settlements hold particular historical significance, reflecting the intricate interactions between local traditions and foreign influences. One such settlement is Betila in Manikganj, which was established by Hindu merchants in the early 19th century, during British colonial rule (Hossain, 2015). This once-thriving township, built upon the remnants of a much older settlement, is marked by its distinctive 'Street front houses'—a unique architectural pattern along narrow streets, once bordered by canals or moats (Chowdhury, 2018). However, as time has passed, these buildings have fallen into disrepair, with their original purpose and value largely forgotten by current inhabitants (Islam & Rahman, 2020). The ongoing, unchecked urban expansion across Bangladesh has compounded the threat to these invaluable cultural resources (Hossain & Rahman, 2019). Betila now faces the imminent danger of irreversible decay, as the growing pressure for modern development threatens to erase its historical identity. This paper seeks to explore the architectural and cultural significance of Betila, emphasizing the urgent need for conservation. By documenting its spatial layout, architectural features, and historical context, this research aims to underscore the importance of preserving this living archaeological site before it is lost to time and neglect (Chowdhury, 2018; Hossain, 2015).

Figure Shows: Land-Use Map of Betila with It's Historical Building Settlement's (Heritage), Residential Building's, Commercial Building's and Community Space's.

Historical Background and Context: Betila, located in the Manikganj district, holds a significant position in the Historically, during the early 10 th to mid- 13 th centuries, Manikganj was a vital cultural and commercial hub (Chakraborty, 2017). Despite the capital moving to Dhaka in the 17 th century, it remained important due to its strategic location (Ahmed, 2019). Betila, between the Kaliganga and Dhaleshwari rivers, became an essential trade node during the Sultanate, Mughal, and colonial periods. The Betila Canal enhanced connectivity, attracting merchants (Hossain, 2015). This history influenced Betila' s architecture, blending local, colonial, and regional styles, and makes it key to Bengal' s urban and commercial evolution (Rahman, 2018).

The term Kasba (Arabic for settlement) describes an administrative and commercial town between villages and cities, vital in Bengal' s medieval governance, trade, and security (Khan, 2016). Located near trade routes and rivers, kasbas served as hubs for trade, administration, and sometimes military activities, governed by officials like the kotwal and quazi (Nasser, 2018). Betila, in Manikganj' s historical landscape, was likely one such kasba, thriving during the Sultanate, Mughal, and colonial periods, with its name reflecting its historic administrative role (Chakraborty, 2017). Its colonial- era architecture, from the 18 th to 20 th centuries, originally served Hindu merchants like the Shahas and Poddars, thriving due to its strategic location near Mirkadim river port (Khan, 2016). The settlement symbolized economic growth, with distinctive architecture merging local and colonial styles (Rahman, 2018). Post- 1947 Partition, Hindu merchants migrated or faced violence, and subsequent upheavals and the 1971 Liberation War devastated Betila (Chowdhury, 2018). Today, many properties formerly owned by Hindus are now Muslim- occupied, reflecting profound political and cultural shifts (Rahman & Hossain, 2019).

The figure shows two rivers covering Betila settlements.

Betila Zamindar Bari, linked to merchants Jyotindra and Satyendra Saha from Kolkata, embodies their legacy. Their family, from the Saha caste, traded in jute during British rule, and their house, along the Nurani River, showcases a blend of cultural influences. Local stories mention large boats navigating the river, facilitating their business. The house, a notable landmark, once featured painted horses used for transport. Personal accounts reveal land dealings with the Saha family, illustrating their significant local influence and complex legacy.

METHODOLOGY

This study employs a comprehensive qualitative and descriptive approach to assess the architectural features, current condition, and future prospects of Betila's heritage buildings. The research is conducted in multiple phases, beginning with field surveys to gather primary data. These surveys involve detailed assessments of the

heritage structures, photographic documentation, and oral surveys from local inhabitants to understand their perceptions and awareness of the site's historical significance. Additionally, the surrounding environment and infrastructure are analyzed to provide a broader context for the site's present state.

A comparative analysis is then performed using secondary data from other colonial-era buildings in the region to examine common architectural features, spatial zoning, and traditional house forms. This comparative study helps contextualize Betila within the larger framework of colonial architecture in Bengal. Finally, all gathered data and documentation are archived, and potential conservation strategies are evaluated. The aim is to propose sustainable methods for preserving Betila's cultural and architectural heritage for future generations.

Evolution of the settlement of Betila: From the structural pattern of the heritage buildings, the chronological development of the area could be traced.
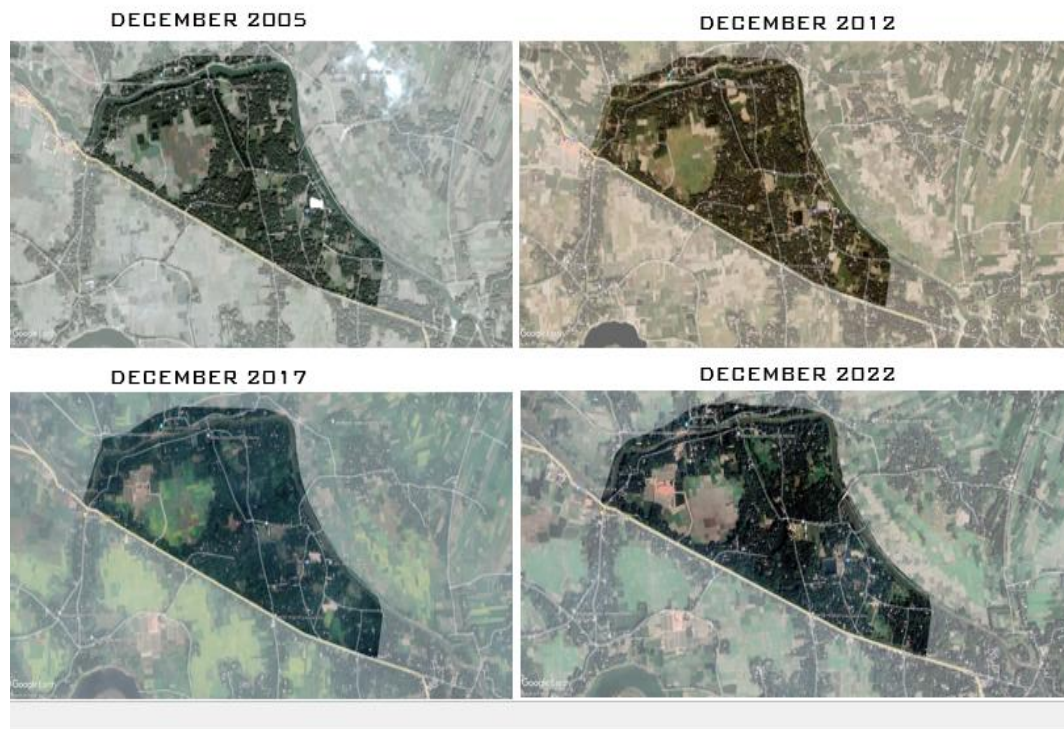

Figure Shows: Axonometric view of chronological evolution of the area in Betila (Source: Author)

The Present condition of the study area: The actual number of heritage buildings remaining in the study area could not be traced completely due to the lack of evidence. Twenty-one buildings could only be found in Nagar Kashba during the study;

Figure Shows: Location of the heritage buildings in the settlement of elite Hindu businessmen of Betila
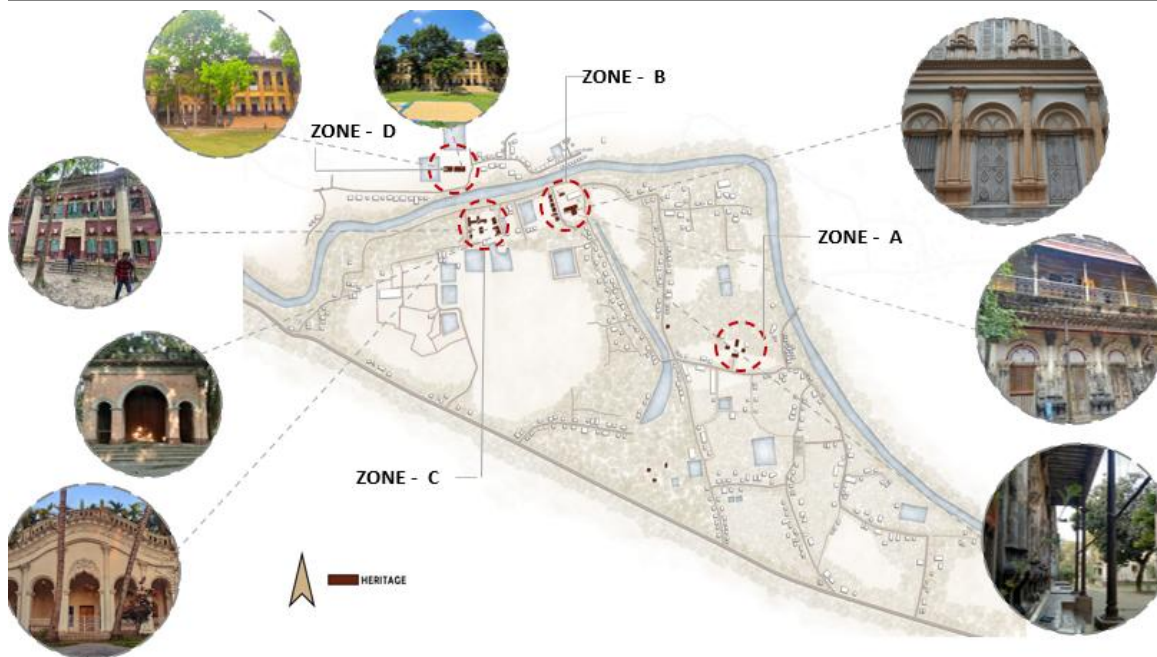
Figure Shows: Map shows the Heritage settlements

Conditions of the Heritage Buildings: Betila's traditional houses were once a symbol of class, status, and culture. These buildings, constructed by wealthy merchants and aristocrats, reflected Mughal and colonial architectural influences (Chowdhury, 2017). The structures, ranging from single-story to three-story, were predominantly two-story buildings (Rahman, 2019). However, over time, there have been significant changes in the ownership and maintenance of these historic buildings. After the partition in 1947, many of these buildings were either sold by their original owners or forcibly taken over (Hossain & Alam, 2016). Some houses were acquired under duress, leaving many owners without proper documentation today (Khan, 2018). Over time, the ownership of these buildings was divided among heirs, and now many of the current owners reside in Dhaka or abroad. As a result, these owners often prefer to earn rental income from their properties rather than maintaining them (Sharma, 2020). Currently, residents of these traditional buildings are attempting to improve their living conditions by making modern alterations. However, due to their socio-economic status, they lack the financial means for proper renovation (Das & Ahmed, 2019). While some owners seek to demolish the old buildings and construct new ones, external interference and poor maintenance are putting the survival of these historic structures at risk (Chowdhury, 2017). As time goes on, pressure on these buildings continues to increase. With the growing population in the area, the tendency to increase rents by businessmen, students, employees, and shop owners is rising (Hossain, 2015). Land prices are increasing, and the evolving economy is changing the character of the area (Khan & Rahman, 2019). Many owners are making modifications to their buildings by adding bathrooms, partitions, or breaking down walls, which damages the architectural beauty of these historic structures (Rahman & Hossain, 2020). What were once valuable representations of historical identity are now often being replaced by modern, functional buildings that meet contemporary needs (Das & Ahmed, 2019). These changes, while fulfilling present-day demands, are disconnected from the cultural heritage of the area. In the future, these traditional structures may be completely replaced, leading to the loss of an important part of our history (Sharma, 2020).

Structural, Infrastructural and Environmental Conditions and Its Evolution: These three conditions, structural, infrastructural, and environmental, are getting worse day by day. The condition of the mythological establishment is quite delicate. It is as if today it is a state of chaos! Modern establishments can be seen in front of the establishment and behind it. There is no setback. In some places, random relationships can be seen. The Betila river has moved far away from the Kasba. There are no branches of the river and no such connection rules. In some places, ponds and streams have dried up and become deserts, where their existence is provided by rocky stairs. Which exist on the ground. The existing path is a ghat and quite neglected. In some places, narrow roads. This road is the only one to go towards the heritage establishment. This narrow lane is used by vehicles like rickshaws, tempos, and CNG auto-rickshaws and acts as a short road to reach other neighborhoods, which makes it unfavorable for pedestrians. The area is littered with exposed electrical wires,

poor stormwater drainage, and littering. The well that can be seen in the back near the house does not even hold water. The entire structure is now in a state of danger and will soon disappear (Rahman & Hossain, 2020).

Elite Hindu Merchants'& Zamindar Houses: Betila was once a settlement characterized by rows of impressive two-story houses, typically not very large, constructed in British colonial or Indo-European architectural styles. While none of these buildings remain in pristine condition today, they still retain elements of their original design. Some have undergone significant alterations, making it difficult to discern their original layout and architectural typology. The houses in Betila vary in both size and shape. Two distinct building types are evident: the Courtyard-style houses and the Bungalow-style houses.
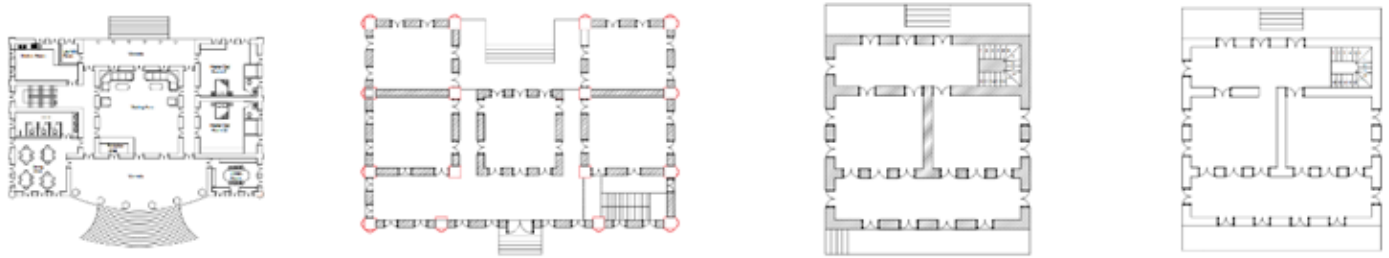

Figure Shows: Ground Floor Plan of Marchent Houses

Single Monolithic House: A single monolithic house in Betila refers to a standalone structure that is typically compact and unified in design. These houses are characterized by being self-contained, often without distinct divisions or courtyards like the bungalow or courtyard-type houses. The design focuses on a singular, cohesive building structure rather than multiple components or spaces. These houses may consist of one story, and they typically have simple, functional layouts suited to the needs of the inhabitants, without complex room organization or external features. Single story buildings. Much more ornamented and fragmented. Building shows arts, aesthetics and appeals.

Courtyard Type House: The houses in Kashba feature two courtyards: the outer courtyard is used for public activities, while the inner courtyard is dedicated to private activities. Some of the buildings in the area follow this design. Based on the traces of previous foundation locations, it is assumed that other buildings also originally had two courtyards.

Bungalow Type House: Bungalow-type houses in Betila are characterized by having no courtyard. These are typically one or two-story buildings, featuring yards either in the front or back. There is no uniformity in the organization of the rooms across different buildings, offering a variety of layouts.

Spatial Organizations: The buildings in Kashba are organized around courtyards that separate public, semi-public, and private spaces. The front courtyard contains public functions like guest rooms and temples, and is used for cultural activities. The private courtyard, accessed through a passage, holds bedrooms and private areas. Colonnaded walkways surround the courtyards, and backyards include kitchen gardens and restrooms. Each house has two service entries, and shared ponds are available for the community. A canal encircles the settlement, serving both as a service route and a security moat.

Architectural Elements: Betila is a historic and culturally significant place in Bangladesh. These houses were primarily used as the residence of the zamindars and merchant people of Betila village. Through its construction, it reflects Bengali heritage, cultural diversity, and the influence of zamindari rule. These features make it clear that this is not just a house but a living history connected to the tradition. The architecture of Betila houses reflects the traditional Bengali architectural style. This is built using local materials to stay cool in hot weather (Chowdhury, 2017). The house has a special sloping roof called a "chala" roof (a sloping roof). This roof helps to drain rainwater and lets the air flow inside, keeping the house cool. The traditional "chala" roof and the walls are designed to provide insulation against the tropical heat. The house also has wide and open verandas, flat roofs, thick walls, and big windows to let in lots of sunlight. The open design helps air move around the house, making it comfortable to live in. All of that prioritizes the circulation of air and natural

light. Betila houses are a good example of Bengali architecture, made to be both useful and beautiful for the warm weather (Rahman, 2019).

Figure Shows: Betila Elit Marchents and Zamindar Houses that's represents the architectural features & legacy

Betila's buildings fuse European and Bengali styles from the colonial period, using brick, wood, tiles, and corrugated sheets. Brick provided strength, especially in large houses like zamindar mansions. Wood, emphasized by European influence, was used for doors, windows, and other parts. Flooring included stone, tiles, and wood, with tiles popular for cooling. Roofs were tile-based but later featured corrugated sheets, blending European designs with local weather needs. These materials and styles showcase Betila's cultural history.
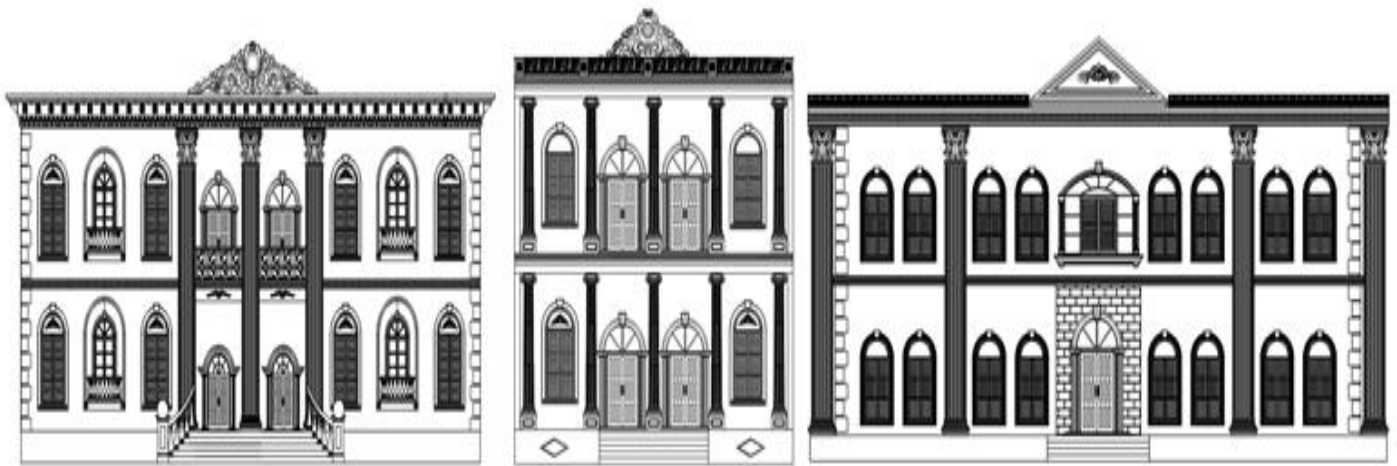

Figure Shows: Elevation of Betila Zamindar and Marchent Houses.

The main entrance of the houses typically features different types of arches, creating an imposing impression before entering the interior space. It mainly uses traditional shapes and designs (Chowdhury, 2017). The entrance to the house would typically feature large, beautifully carved wooden doors, often flanked by arches. These arches are an important feature of Bengali architecture, symbolizing grandeur and an imposing welcome. The doors would be adorned with intricate carvings of mythological figures, floral patterns, and scenes from traditional Bengali culture (Rahman & Hossain, 2019). Upon entering, you would be greeted by a large open space leading to the central courtyard. This would be a grand entrance, setting the tone for the rest of the house. The walls of the house often feature various carvings and statues. These included images of Lord Shiva, Gauri-Shankar, floral patterns, etc. There are also instances of intricate stonework in several places.

These are mythological scenes and nature-inspired motifs. These carvings would be hand-crafted in stone or wood (Hossain, 2015). The design of the walls would also feature lush floral patterns, a common feature in Bengali homes, symbolizing beauty and nature. Large windows and niches (small rooms constructed on the exterior of the house) are key architectural features of the zamindar house. These windows and niches facilitated the circulation of natural light and air. The house would feature large wooden windows with intricate designs and shutters that could be opened to allow air and sunlight to enter. These windows would be strategically placed to ensure the house stays cool during the day and well-lit in the evening. Small rooms, called khops, would be built outside the main structure. These niches would serve various purposes such as storage, small living spaces, or as places to keep cool during the heat of the day (Khan, 2016).
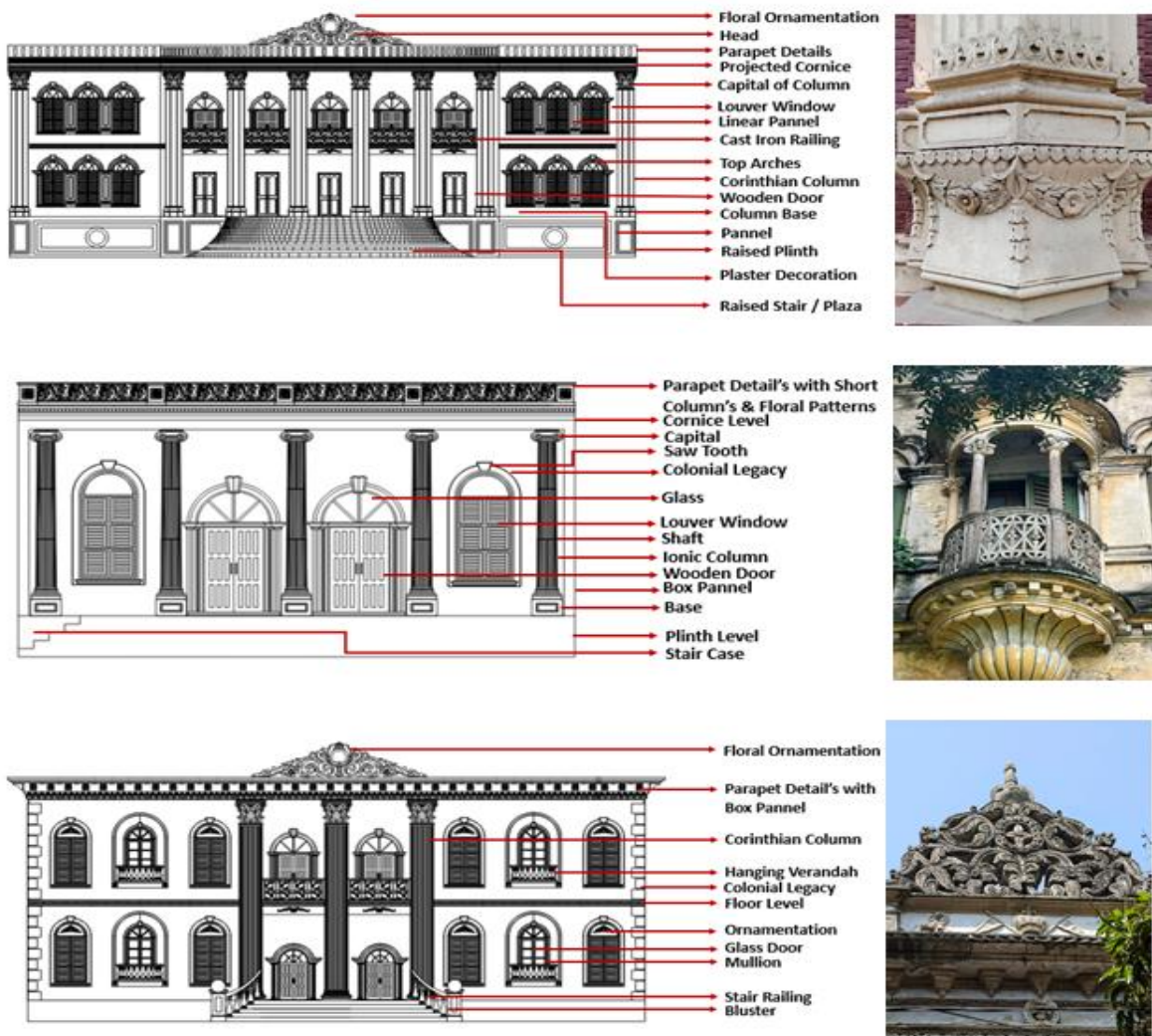

Figure Shows: Betial ancient houses with its detail ornamentation and aesthetics view.

The house featured large galleries or corridors for easy movement and connectivity to the upper floors. These corridors helped facilitate easy and distinct movement within the house. The house would have large corridors or galleries, which not only facilitated movement between rooms but also connected different parts of the house (such as the living area, dining area, and courtyard). These galleries would be lined with columns and arches, offering a sense of openness and providing natural ventilation. The interior of the house was divided into different rooms, such as the servant's quarters, zamindar's bedroom, guest room, and kitchen. Each room was spacious and luxurious, featuring traditional furniture and decorative lighting systems. The interior of the house would be divided into various distinct sections: Zamindar's Bedroom**:** The largest and most luxurious room, decorated with traditional furniture like four-poster beds, wooden wardrobes, and chandeliers. Guest Room**:** Often reserved for important visitors, with lavish seating arrangements and ornate décor. Bhangi Kachher (Servant's Quarters)**:** Smaller rooms for staff, located in the back part of the house, often with basic furniture. The furniture inside would be made from wood, with rich carvings and polished surfaces. Brass or copper items would be used as part of the décor
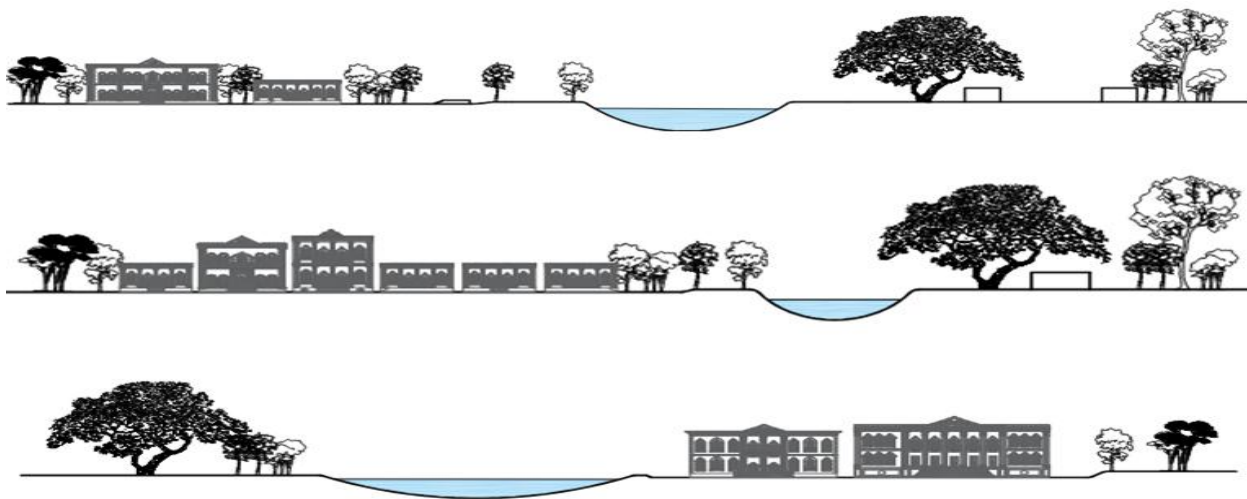
Figure Shows: Architetural sectional algorithm of the Betila with its heritage surroundings and comprises.

The zamindar house was surrounded by trees, flowers, and gardens, adding natural beauty and serenity. Such plants were vital in traditional Bengali homes. A key feature was the central courtyard, often with plants and trees. Betila Zamindar Bari likely had a lush garden of ornamental and flowering plants along verandas, integrating nature with shaded pathways and greenery. A large pond, often with stone stairs and ornamental design, was typical in the courtyard for water collection and aesthetics. These features, including carved stone steps around the pond, enhanced the house's beauty and tranquility.

RECOMMENDATIONS

The unique settlement of Betila faces significant challenges due to contemporary urban development, environmental factors, and financial constraints. Immediate conservation efforts are crucial to safeguard this historic area. The first step toward any effective conservation strategy should be comprehensive documentation of the settlement's architectural features and surrounding environment in their current state. As seen in many cases, government-led conservation efforts often freeze the life of heritage sites, creating long-term maintenance challenges. Therefore, conservation programs for Betila must consider the cultural fabric and social needs of the local community to ensure long-term sustainability. Policies should be developed to engage both private and public stakeholders in the responsibility of preserving this heritage. A balanced approach that includes adaptive reuse, community-driven tourism initiatives involving local residents, and, when necessary, the integration of modern elements, all under the guidance of heritage specialists, could revitalize the settlement. This strategy would breathe new life into Betila's historic buildings, preserving both its resources and cultural value for future generations.
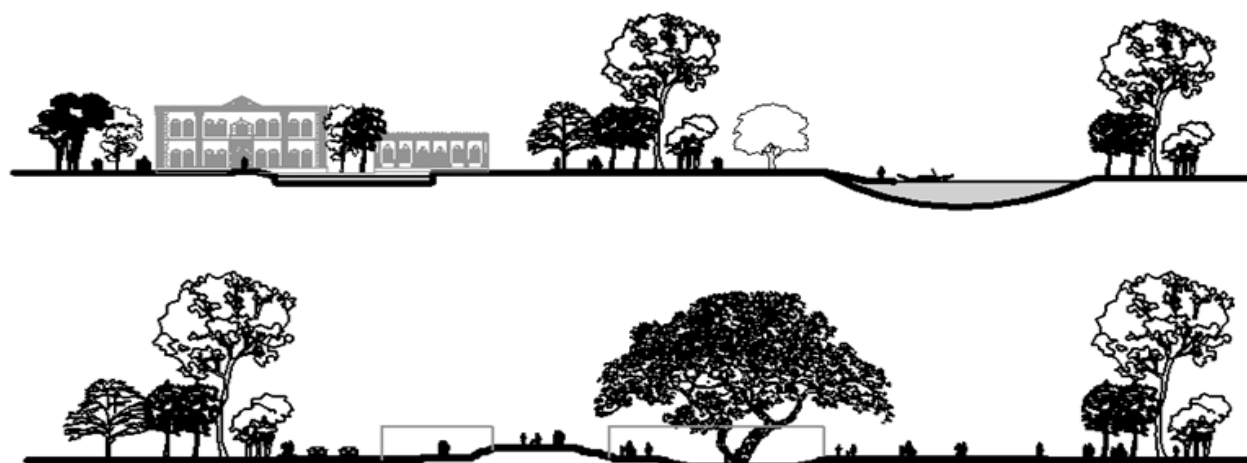

Figure Shows: Proposed Architetural sectional algorithm of the Betila with its heritage surroundings and comprises.

Betila Kasba is a historically and culturally rich area with architectural landmarks from various periods and natural beauty. Some structures are well-preserved, others need restoration (Hossain, 2015). The Betila Zamindar Bari could be turned into a heritage museum to promote local history and pride. Surrounding facilities like a guest house, café, hotel, library, and research center could attract tourists. Its natural features, including the Jamuna River, canals, ponds, and rural environment, make it appealing. Developing it as a resort could boost tourism (Rahman & Hossain, 2019), with heritage and water trails for exploration. The water trails along rivers and canals would attract water-based activities. The region's Hindu temples and Muslim mosques, with their architecture, would also draw visitors. The rural setting offers local life and agriculture, increasing appeal. For growth, local government efforts in agriculture, education, infrastructure, and tourism are vital. With proper measures, Betila Kasba can fully realize its potential as a rural destination, preserving culture, heritage, and natural resources while becoming a thriving tourism hub.
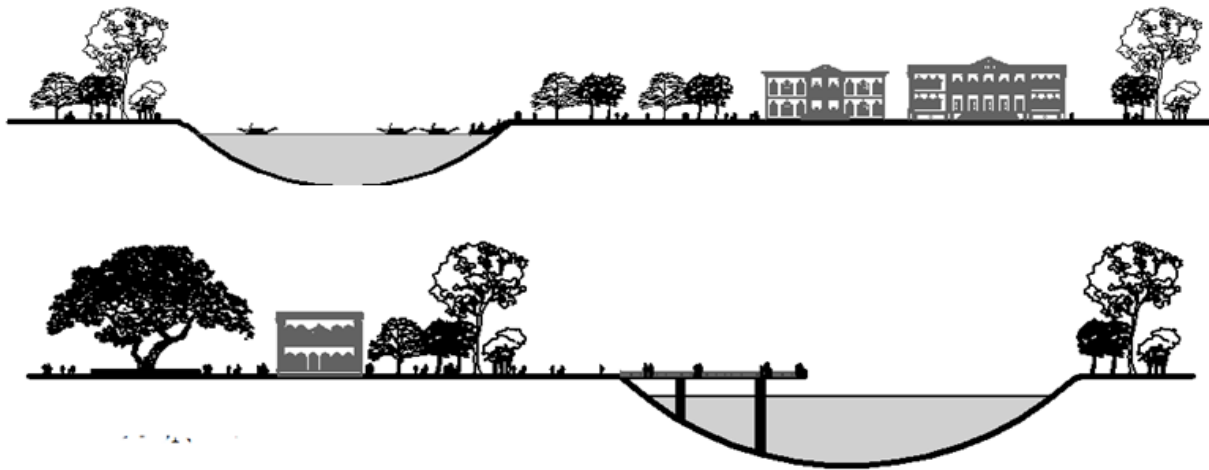

Figure Shows: Proposed Architetural sectional algorithm of the Betila with its heritage surroundings and comprises.

CONCLUSION

From the study above, it is evident that the architectural quality and spatial arrangement of the historic residential buildings in Betila make it a prime candidate for conservation. The settlement, with its rows of colonial-era houses and strategic location, holds immense cultural, historical, and architectural significance. The documented features and analysis presented in this paper serve as a valuable record of the socio-cultural, political, economic, and environmental conditions that shaped the area during its peak in Bengal's vibrant past. This study not only highlights the historical value of Betila but also emphasizes the urgency of re-evaluating and preserving this living archaeological site. Proper conservation efforts could breathe new life into this fading heritage, ensuring that Betila's unique story and architectural legacy are safeguarded for future generations. The findings of this research offer a foundation for meaningful conservation strategies, fostering greater appreciation and protection of Betila's historical and cultural wealth.

ACKNOWLEDGEMENTS

REFERENCES

1. Chowdhury, S. (2018). Architectural Heritage of Bangladesh: Colonial Legacies and Local Adaptations. Dhaka: University Press Limited.
2. Hossain, M. (2015). The History of Colonial Settlements in Bangladesh: Betila and Beyond. Dhaka: BRAC University Press.

3. Hossain, M., & Rahman, A. (2019). Urban Expansion and Cultural Heritage in Bangladesh: Challenges and Strategies for Conservation. Dhaka: Bangla Academy.
4. Islam, S., & Rahman, A. (2020). Preserving the Past: A Study of Declining Heritage Sites in Bangladesh. Journal of Architectural Conservation, 15(2), 102-118.
5. Ahmed, M. (2019). Manikganj: A Historical and Cultural Overview. Dhaka: Bangla Academy.
6. Chakraborty, S. (2017). Trade and Commerce in Medieval Bengal: The Role of Manikganj. Journal of South Asian History, 22(3), 201-218.
7. Chowdhury, S. (2018). Architectural Heritage of Bangladesh: Colonial Legacies and Local Adaptations. Dhaka: University Press Limited.
8. Hossain, M. (2015). The History of Colonial Settlements in Bangladesh: Betila and Beyond. Dhaka: BRAC University Press.
9. Khan, R. (2016). Kasbas of Bengal: Administrative and Commercial Settlements in the Medieval Period. Dhaka: Dhaka University Press.
10. Nasser, S. (2020). Kasba Settlements in Medieval Bengal: Geographical and Administrative Functions. Journal of Historical Geography, 18(1), 35-49.
11. Rahman, A. (2018). Urbanization and Architecture in Colonial Bengal. Dhaka: BRAC University Press.
12. Rahman, A., & Hossain, M. (2019). Land Ownership and Social Changes in Post-Partition Bangladesh: A Case Study of Betila. Social History Review, 27(2), 112-130.
13. Chowdhury, S. (2017). The Decline of Traditional Architecture in Post-Colonial Bangladesh. Dhaka: University Press Limited.
14. Das, M., & Ahmed, K. (2019). Socio-economic Challenges and the Preservation of Heritage in Bangladesh. Journal of Urban Development, 14(3), 89-102.
15. Hossain, M. (2015). Urbanization and Housing in Colonial and Post-Colonial Bangladesh: A Historical Perspective. Dhaka: BRAC University Press.
16. Hossain, M., & Alam, R. (2016). Land Ownership and Social Upheaval in Post-Partition Bangladesh: The Case of Betila. South Asian History Review, 11(2), 45-60.
17. Khan, A. (2018). Colonial Legacy and Modernization: The Transformation of Historic Settlements in Bangladesh. Dhaka: Bangla Academy.
18. Khan, A., & Rahman, A. (2019). Economic Growth and Its Impact on Heritage Conservation in Urban Bangladesh. Journal of Architectural Conservation, 22(4), 134-148.
19. Rahman, A. (2019). Colonial Architecture and its Impact on Contemporary Bengali Urban Spaces. Dhaka: BRAC University Press.
20. Rahman, A., & Hossain, M. (2020). Revisiting Bangladesh's Heritage: The Struggle Between Modern Development and Conservation. Dhaka: Dhaka University Press.
21. Sharma, D. (2020). Urban Renewal and Gentrification: The Case of Historic Housing in Bangladesh. Journal of Urban Sociology, 18(1), 75-89.
22. Rahman, A., & Hossain, M. (2020). Revisiting Bangladesh's Heritage: The Struggle Between Modern Development and Conservation. Dhaka: Dhaka University Press.
23. Chowdhury, S. (2017). Traditional Bengali Architecture: Design, Function, and Heritage. Dhaka: University Press Limited.
24. Rahman, A. (2019). Bengali Architecture in the Colonial Period: Influences and Adaptations. Dhaka: BRAC University Press.
25. Chowdhury, S. (2017). Bengali Architecture and the Colonial Influence: A Historical Overview. Dhaka: University Press Limited.
26. Hossain, M., & Rahman, A. (2018). The Fusion of European and Bengali Architectural Traditions in Colonial Bengal. Journal of Architectural History, 12(3), 142-156.
27. Chowdhury, S. (2017). Traditional Bengali Architecture: Design, Function, and Heritage. Dhaka: University Press Limited.
28. Hossain, M. (2015). The Evolution of Bengali Architecture: An Analysis of Colonial Influences on Design and Structure. Dhaka: BRAC University Press.
29. Rahman, A., & Hossain, M. (2019). Bengali Architectural Heritage: Carving the Past into Living Spaces. Journal of Architecture & Culture, 23(2), 121-135.

30. Khan, A. (2016). Bengali Residential Architecture: From Zamindars to Modernity. Dhaka: Dhaka University Press.
31. Hossain, M. (2015). The Evolution of Bengali Architecture: An Analysis of Colonial Influences on Design and Structure. Dhaka: BRAC University Press.
32. Rahman, A., & Hossain, M. (2019). Tourism Development and Heritage Preservation in Rural Bangladesh: The Case of Betila Kasba. Journal of Sustainable Tourism, 25(4), 302-315.