

Architectural Imprints of Colonial Rule in Bargarh, Odisha

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Abstract

The architectural imprints of colonial rule in Bargarh District, Odisha, reflect a profound transformation in the region's built environment, stemming from the intersection of indigenous architectural traditions and colonial influences. This study delves into the material and structural legacy left by the British in Bargarh, analyzing key examples of colonial architecture in public, religious, and residential buildings. Through a combination of historical research, field surveys, and architectural analysis, the study explores how colonial design principles were adapted to local contexts and climate, creating a unique architectural identity that continues to influence modern-day Odisha. The research also highlights the socio-political implications of these architectural changes, focusing on their role in asserting colonial dominance and shaping the local socio-cultural fabric. By examining these structures, the paper aims to uncover the lasting impact of colonialism on the district's architectural landscape and its significance in contemporary heritage preservation debates.

Keywords: Colonial Architecture, Bargarh District, Odisha, Colonial Rule, Architectural Legacy, Built Environment, Indigenous Architecture, Socio-political Influence, Heritage Preservation, Historical Architecture.

1. Introduction

The region of Bargarh, historically identified in 11th-century inscriptions as Baghar Kota, represents a significant site of architectural and administrative transition in Western Odisha.ⁱ Originally established as a fortified settlement on the left bank of the Jira River, the town served as a strategic military headquarters for Balaram Dev, the first Chauhan Raja of Sambalpur. During the Chauhan era, the architectural landscape was dominated by defensive structures and religious deulas, most notably the 15th-century Nrusinghanath Temple.ⁱⁱ The British annexation of the Sambalpur region in 1849, following the Doctrine of Lapse upon the death of Raja Narayan Singh, introduced a new architectural paradigm.ⁱⁱⁱ This colonial era (1849–1947) saw the emergence of institutional buildings characterized by Victorian and Neoclassical influences, adapted to the tropical climate of Odisha through the use of arched verandahs, high ceilings, and sophisticated ventilation systems.^{iv} Following Indian independence, Bargarh evolved into a "laboratory" for the Cooperative Movement, leading to the construction of massive industrial units like the ACC Bargarh cement plant and various cooperative mills.¹⁰ The 1993 formalization of Bargarh as a separate district necessitated a modern administrative infrastructure, resulting in the construction of the District Collectorate and the establishment of the District Museum in the Gandhi Smriti Pathagara.

2. Origin

Bargarh, historically part of the Sambalpur tract and the South Kosala region, occupies a strategic position on the western border of Odisha, near Chhattisgarh. Situated along the banks of the Jeera River, Bargarh has been historically significant for both its agricultural productivity and its strategic defense position. The geographical location, bridging the coastal plains and the central Indian plateau, influenced the architectural adaptations of the region, with a climate characterized by extreme

heat during summer and heavy monsoons during the rainy season. This unique geography necessitated specific architectural designs that were responsive to the local conditions of Odisha's environment.^v

Bargarh's origins trace back to the 11th century when it was known as "Baghar Kota." The town was established as a fortified settlement under the rule of the Chauhan dynasty, particularly during the reign of Balaram Dev, who is credited with founding the town. The fortifications that characterized the early town were primarily defensive, designed to protect the region from invasions and to establish control over the surrounding areas. The Chauhans, a prominent dynasty in the region, left their architectural imprint with military structures, including forts, along with religious shrines that formed the heart of the town's cultural and spiritual life.^{vi}

The Nrusinghanath Temple, a significant example of the architecture from this period, was built during the 15th century and remains one of the most iconic religious sites in Bargarh. It is a fine example of the Kalinga style of temple architecture, with a towering central spire and intricately carved deulas (temples). The structure is a testament to the reverence for deities within the Chauhan dynasty's religious architecture and was a central site of worship for centuries. Additionally, other smaller shrines and forts constructed during this period showcase the enduring military and spiritual influence of the Chauhan dynasty, contributing to Bargarh's role as a fortified town on the frontier of the region.^{vii}

By the late 19th century, Bargarh's political and architectural landscape shifted with the advent of British rule. The British annexation of the Sambalpur region in 1849, following the application of the Doctrine of Lapse, brought about a significant transformation. The region's administrative and architectural needs changed drastically under colonial rule. As the British consolidated their power, they introduced European-inspired architectural forms in key institutions. The colonial influence began to reshape Bargarh, and the traditional, defense-oriented Chauhan structures were gradually supplemented or replaced by buildings designed for governance, education, and healthcare. The introduction of colonial infrastructure symbolized both the consolidation of British rule and the integration of the region into the broader imperial economy.^{viii}

This period also saw the construction of vital road networks, bridges, and buildings that served to facilitate the movement of goods and administration across the region. One such example is the Jeera Bridge, built in 1937, a critical infrastructure project that connected Bargarh to Madhya Pradesh. The bridge, made of colonial-era ironwork, was part of the Great Eastern Road (National Highway 6), which enhanced trade and commerce between Odisha and western India. This connectivity was essential in shaping Bargarh's economic development and its integration into the larger network of British-era trade routes and administrative hubs.^{ix}

3. Review of Literature and Methodology

The architectural history of Bargarh has been studied within the context of regional, colonial, and post-independence transformations, although there is a lack of focused research specifically on Bargarh's architecture. The medieval period in Bargarh, during the reign of the Chauhan dynasty, is primarily documented through the structures built for defense and religious purposes. Notably, the Nrusinghanath Temple, built in the 15th century, serves as a key example of Kalinga-style architecture. The works of Raghumani Naik explore similar medieval structures and emphasize the role of these temples and forts in shaping the town's early architectural identity.^x

The British colonial influence on Bargarh's architecture is primarily discussed in terms of institutional buildings. Studies on colonial architecture in India focus on urban centers, but Bargarh's architectural evolution during this period is marked by the construction of schools, churches, and administrative buildings with Indo-European designs. The George High School (1914) and Christ the King Church (1931) serve as notable examples of this fusion of European and local architectural styles, which were adapted to the tropical climate of Odisha. Though comprehensive studies on Bargarh are limited, the colonial impact is clearly evident in these public buildings, which were constructed to reflect the authority and control of the British colonial administration.^{xi} Post-independence, Bargarh's

architectural landscape underwent significant change with the rise of industrialization and cooperative movements. Structures like the ACC Bargarh Cement Plant (1968) and the Bargarh Cooperative Sugar Mill represent the region's transition from an agricultural base to a more industrialized economy. The cooperative movement, in particular, influenced the construction of large-scale industrial and cooperative complexes, which shaped the town's post-independence architectural style. However, scholarly work specifically examining these industrial structures is limited. The formation of Bargarh as a separate district in 1993 necessitated the construction of modern administrative buildings, such as the District Collectorate and District Museum. These buildings marked the district's modernization and were built to accommodate the administrative needs of the new district. The architectural styles of these buildings reflect a blend of contemporary and traditional designs, illustrating the shift from a colonial to a post-colonial identity.^{xii}

The methodology of this study combines historical analysis with architectural description. Archival documents, historical records, and local publications were reviewed to understand the evolution of Bargarh's architecture from the Chauhan period to the present. On-site surveys and photographic documentation of key architectural landmarks, such as George High School and Christ the King Church, were conducted to assess their stylistic elements and functional adaptations. Additionally, interviews with local historians and residents provided insights into the cultural and historical significance of these buildings. This research also incorporates a comparative analysis of Bargarh's architectural trends with those seen in other parts of Odisha and India during similar historical periods.^{xiii}

4. Objectives of the Study

1. To examine the architectural evolution of Bargarh, from its medieval fortifications to colonial and post-independence developments.
2. To analyze the impact of colonial architectural styles on key public buildings in Bargarh, such as George High School and Christ the King Church.
3. To explore how modern industrial and administrative buildings in Bargarh reflect the socio-economic changes following its district formation in 1993.

5. Historical Overview: Chauhan to Colonial Transition

The history of Bargarh reflects a dramatic transformation from the dominance of the Chauhan dynasty in the medieval period to the consolidation of British colonial rule and the subsequent development of a modern administrative and industrial hub post-independence. This historical trajectory can be understood through both the architectural evolution of the region and the shifting socio-political power structures that shaped it.^{xiv}

a. Chauhan Dynasty and Early Fortifications (11th–16th Century)

Bargarh, originally known as Baghar Kota, was established during the Chauhan dynasty in the 11th century. The Chauhans were a prominent dynasty that ruled a cluster of 18 states in Western Odisha and Eastern Madhya Pradesh. Their rule left a lasting architectural legacy, particularly in the form of defensive structures and religious monuments. Bargarh was strategically located along the banks of the Jeera River, making it an important military outpost for the Chauhans. During this period, the primary architectural focus was on fortifications designed to protect the region from invasions, as well as religious shrines that reflected the dynasty's patronage of temples.^{xv}

Nrusinghanath Temple, built in the 15th century, is one of the most prominent architectural examples from this period. This temple, built in the Kalinga style of temple architecture, features a towering spire (or Shikhara) and intricate carvings of Hindu deities. The temple stands as a significant symbol of religious devotion and architectural sophistication in Bargarh during the medieval period.

The temple's 45-ft height and the Nav Grah (Nine Planets) carvings in the inner sanctum reflect the fusion of both architectural skill and religious beliefs central to the Chauhans' influence in the region.^{xvi}

In the 16th century, Balaram Dev, the Chauhan ruler, further expanded the region's fortifications. He constructed a major fort on the Jeera River, marking a significant addition to the region's military architecture. These forts were built using locally available materials, showcasing the fusion of regional and architectural traditions of the time. The forts not only served as defensive structures but also as symbols of the Chauhans' political power and territorial control.^{xvii}

b. The Colonial Era (1849–1947)

The political and architectural landscape of Bargarh shifted dramatically in 1849 when the British annexed the Sambalpur region following the death of Raja Narayan Singh, marking the end of the Chauhan dynasty's rule. With the annexation, the Doctrine of Lapse was invoked, and the region came under direct British control. This transition from feudal rule to colonial administration brought about profound changes in the architecture of Bargarh.^{xviii} Under British rule, there was a focus on constructing public institutions that represented the colonial state's authority and administration. George High School, constructed in 1914, serves as one of the finest examples of British colonial architecture in Bargarh. The school's Neoclassical design, characterized by symmetrical facades, red brick masonry, and large arched windows, demonstrates the colonial influence on educational infrastructure. The building's design also incorporated tropical adaptations, such as wide verandahs and high ceilings to improve ventilation in the humid climate of Odisha. This architectural style symbolized the British emphasis on the education system as a means of control and cultural assimilation.^{xix}

In 1931, the Christ the King Church was constructed in Lancet Gothic style under the patronage of the Catholic Mission. The church's design includes a 157-foot German spire, which reflects European Gothic elements. The church's bow-of-a-ship plan is an iconic feature, symbolizing the spiritual and cultural influences of the Catholic Church during the colonial period. The construction of such monumental religious buildings during the colonial period underscores the British effort to solidify their control over the region's religious and cultural life.^{xx} The British also undertook significant infrastructure projects during their rule, notably the Jeera Bridge (Junha Pulia) built in 1937. This bridge, a colonial industrial ironwork structure, was crucial for connecting Bargarh with Madhya Pradesh and other parts of the region. The Jeera Bridge facilitated trade and communication, further integrating Bargarh into the broader colonial economy and facilitating administrative and military logistics.^{xxi}

c. Post-Independence Developments (1947–1993)

After India gained independence in 1947, Bargarh underwent rapid industrialization and infrastructural development. The region's agricultural landscape was gradually transformed, and the establishment of cooperative industries marked a new chapter in the town's architectural evolution. The Bargarh Cooperative Sugar Mill, which began operations in the mid-20th century, is an important example of post-independence industrial architecture. Its construction reflected the ideals of the cooperative movement, which sought to empower local farmers and promote agricultural development. The mill's industrial architecture was pragmatic and utilitarian, designed to meet the needs of mass sugar production while contributing to the regional economy.^{xxii}

In 1968, the ACC Bargarh Cement Plant was established, further cementing the town's role as an industrial hub. The plant's architectural design, characterized by industrial brutalism, focused on functionality and efficiency. The plant's massive reinforced concrete silos and extensive rail infrastructure were integral to the large-scale cement production that supported the development of Bargarh's infrastructure and regional growth. The cement plant remains one of the most significant industrial structures in the region, reflecting both the era's architectural trends and its economic importance.

d. District Formation and Modernization (1993–Present)

The formation of Bargarh as a separate district in 1993 marked the beginning of a new era for the town, necessitating the construction of modern administrative buildings. The District Collectorate was established to serve as the administrative center, and the District Museum was relocated to Gandhi Smriti Pathagara in 1997 to preserve and showcase the region’s rich cultural and architectural heritage. The development of these modern public buildings marked a shift toward more contemporary architectural styles while still reflecting the historical legacy of the region. The District Collectorate building, for instance, combines modern, functional design with elements of local tradition, providing a physical representation of Bargarh’s administrative and cultural evolution.

Table 1: Master Timeline of Administrative and Architectural Evolution in Bargarh

Period	Milestone/Structure	Architectural Significance
11th Century	Identification of Baghar Kota	Inscriptional evidence of early fortification.
15th Century	Foundation of Nrusinghanath Temple	Kalinga style deula; 45 ft height; inner sanctum with Nav Grahs.
16th Century	Balaram Dev's Headquarters	Construction of a major fort on the Jira River.
1695–1765	Kedarnath Temple	Built by Dewan Dakshin Ray; includes remains of Kedarnath fort.
1849	British Annexation	Lapsing of the Chauhan state to the East India Company.
1914	George High School	Neoclassical colonial institutional design; red brick masonry.
1931	Christ the King Church	Lancet Gothic style; 157 ft German spire; bow-of-a-ship plan.
1937	Jeera Bridge (Junha Pulia)	Industrial colonial ironwork; connected Odisha to Madhya Pradesh.
1960	Panchayat College	Post-independence transitional modernism; 50-acre campus.

Source: Data Compiled by the Researcher

The timeline in Table 1 outlines the key milestones in the administrative and architectural evolution of Bargarh, highlighting the region’s historical development. The table begins in the 11th century with the identification of Baghar Kota, which offers inscriptional evidence of early fortification in the region. Moving into the 15th century, the Nrusinghanath Temple was established, reflecting the Kalinga style

deula with a significant structure that included a 45 ft tall temple and the inner sanctum featuring the Nav Grahs (nine celestial bodies). In the 16th century, Balaram Dev's Headquarters marked the construction of a major fort along the Jira River, symbolizing the growing power of the local leadership. The 17th and 18th centuries saw the Kedarnath Temple built by Dewan Dakshin Ray, which included remains of the Kedarnath fort. The British annexation of Bargarh in 1849 signified a major political shift, with the state falling under British East India Company control.

The 20th century introduced several architectural milestones, including the George High School in 1914, with its neoclassical colonial institutional design, and the Christ the King Church in 1931, built in the Lancet Gothic style, featuring a towering 157 ft German spire. The Jeera Bridge (Junha Pulia), constructed in 1937, was notable for its industrial colonial ironwork, linking Odisha to Madhya Pradesh. The Panchayat College in 1960 marked a shift to post-independence transitional modernism, occupying a 50-acre campus. In 1968, the ACC Bargarh Cement Plant exemplified industrial brutalism with its large infrastructure and captive power plant, while 1993 marked the District Formation, which separated Bargarh from Sambalpur and began the modern administrative era. Finally, the District Museum was relocated to Gandhi Smriti Pathagara in 1997 to preserve the region's heritage, providing a contemporary space for historical reflection. Each of these landmarks and events contributes to Bargarh's rich and diverse history, from fortifications and temples to colonial and industrial architecture, leading to its present-day administrative and cultural landscape.

6. Colonial Institutional Architecture

The British colonial period in India was marked by the construction of schools, churches, and hospitals, which served not only as functional spaces but also as powerful symbols of British administrative control and social reform. These buildings embodied the colonial project of establishing an infrastructure that served both practical and ideological purposes, integrating European architectural styles with local environmental considerations. Bargarh, like many other parts of India, saw the introduction of this colonial architectural model that was designed to assert British authority, facilitate governance, and promote social change, especially in education and religion.^{xxiii}

a. George High School (1914)

One of the most prominent examples of British colonial architecture in Bargarh is George High School, built in 1914. This school embodies the fusion of European architectural styles with adaptations suited to the tropical climate of Odisha. It represents the British colonial emphasis on institutional buildings, particularly in education, which were viewed as essential tools for social reform and colonial control. The school's design draws heavily from Neoclassical architecture, with symmetrical facades, a central entrance framed by a semi-circular arch, and the use of traditional Victorian principles such as high ceilings and large windows. These architectural features were specifically chosen to promote airflow and improve ventilation, which were necessary in the humid and tropical climate of Odisha. By adapting European architectural principles to local needs, British colonial architects sought to ensure that their buildings would be functional, comfortable, and aligned with the environmental conditions of their Indian colonies.^{xxiv} The school's architectural design serves as a physical manifestation of the British effort to modernize and "civilize" India through educational institutions. In Bargarh, George High School was not just a place for imparting knowledge but also a tool for imposing colonial values and controlling the social structure. The British used education as a way to shape the minds of young Indians in line with their imperial goals. The architectural form of George High School was thus symbolic, embodying both the educational ideals of the British and the tools of governance.^{xxv}

a.1. Architectural Features

The facade of the school is one of the most striking elements of its design. Double pilasters and cornices emphasize the central block, marking its administrative importance. The symmetrical design of the building mirrors the orderliness and structure that the British sought to impart through their educational systems. The ventilation system, an important feature in the design of the school, includes

unique decorative ventilation holes arranged below the roofline, forming a five-pointed star with a cross, alongside the letters "M G H S" (indicating the school's name). This feature not only ensured proper airflow and ventilation in the humid environment but also served as a decorative symbol, reflecting the British practice of incorporating symbolic elements into their architectural designs.^{xxvi} The materials used in constructing George High School—exposed red bricks and lime mortar—were selected for their durability in the humid environment. The use of exposed brickwork is a signature element of colonial architecture in India, reflecting the adaptation of Western building styles to local materials. Arched windows, recessed framing, and wooden louvred shutters, typically painted in colonial blue or grey, are functional elements that allowed for the circulation of air, providing natural cooling and shade within the school. The combination of these architectural features ensured that the school was a comfortable space for learning in the hot, humid climate of Odisha, while simultaneously adhering to European architectural traditions.^{xxvii} Thus, George High School stands as both a symbol of British colonial power and a practical response to the environmental conditions of the region. Its design reflects the dual purpose of colonial architecture: to serve functional needs while reinforcing British ideals and control over the population.

b. Christ the King Church (1931)

Another important example of colonial architecture in Bargarh is Christ the King Church, completed in 1931. The church was commissioned by Rev. Fr. Francis Bertram S.J., a missionary, and designed by architect S.A. Gnana Pragasam Pillai. This church is an extraordinary example of Lancet Gothic architecture, which was commonly used for church designs during the British colonial period. Unlike other types of Gothic architecture, which often feature highly ornate interiors and large, stained-glass windows, the design of Christ the King Church reflects a more austere, minimalist interpretation of Gothic principles.^{xxviii} The church is dominated by its 157-foot German spire, which rises dramatically from the central portal of the building. This spire is a striking feature of the church, drawing the eye upward and reinforcing the verticality that is characteristic of Gothic architecture. The spires and needle pinnacles that adorn the exterior of the church give the building a sense of soaring height, further emphasizing its religious symbolism. These vertical elements were designed to inspire awe and elevate the spirit, a key aspect of Gothic church design that sought to direct the worshiper's gaze toward the heavens.

b.1. Design Specifics

The plan of Christ the King Church is also distinctive. The external structure is designed to resemble the bow of an ancient Roman ship, symbolizing the church as a vessel guiding the faithful toward salvation. This plan gives the building a dynamic, forward-moving quality, evoking the idea of the church as both a physical and spiritual journey for its worshipers. This design, blending elements of both Gothic and symbolic forms, reflects the Catholic Church's mission during the colonial period to establish its presence in the region.^{xxix} The exterior of the church is adorned with slender, needle pinnacles and flamboyant elevations on the buttresses, contributing to the dramatic verticality of the structure. These architectural details are not merely decorative but also serve to emphasize the church's religious significance, creating a visual focal point that commands reverence and contemplation. In contrast, the interior of the church is much simpler than that of traditional European Gothic cathedrals, which often feature colorful stained-glass windows. Instead, the interior of Christ the King Church is characterized by its structural purity, focusing on the clean lines of the architecture and the vertical ascension of space, with less emphasis on ornamental decoration. This simplicity may reflect the austere religious ethos of the missionaries who commissioned the church.

b.2. Architectural Purpose and Symbolism

Both George High School and Christ the King Church illustrate the British colonial effort to impose control over India's educational and religious practices through the built environment. While George High School served as a space for molding young minds in the service of the colonial state, Christ the King Church was a center of religious instruction and spiritual authority under the colonial

administration. The architecture of both buildings, though distinct in style, reflects the colonial mission to establish institutions that were both functional and symbolic, fostering control, reform, and integration into the colonial system.^{xxx} These buildings continue to serve as historical landmarks in Bargarh, embodying the legacy of British rule and the colonial architectural influence on the region. The integration of European architectural styles with local conditions and materials demonstrates how colonial architecture in India was not a simple transplantation of foreign ideas but a complex adaptation to the environment and socio-political context.

c. Ghens Zamindar Palace

The Ghens (Ghess) Zamindar Palace, located in Ghess village (coordinates: 21°11'00"N 83°17'00"E), Bargarh district, once served as the fortified headquarters of the Binjhal zamindar family, who controlled approximately 20 villages including Ghens, Petupali, Ghumuripali, and Jhankarpali during the early 19th century. This palace complex represents the earliest architectural encounter between pre-colonial zamindari authority and British colonial expansion in Bargarh, predating the institutional buildings (schools, churches) analyzed later in this study. The palace gained national historical significance through Madho Singh Bariha (also called Madhab Singh), the zamindar whose leadership during the 1857 Sambalpur Uprising made Ghens a key center of organized resistance against British rule. Madho Singh allied with Veer Surendra Sai of Sambalpur, mobilizing local Binjhal tribes and zamindars in sustained guerrilla warfare that challenged British control over western Odisha's agrarian revenue systems. Following the uprising's suppression, the British response was devastating: Madho Singh and several sons were executed by hanging, the zamindari estate was confiscated, and the palace complex was systematically destroyed or left to ruin. This deliberate destruction physically inscribed colonial dominance onto the built landscape, transforming a symbol of local autonomy into architectural rubble. While surviving today primarily as ruins and oral memory, the Ghens palace followed the classic western Odisha zamindari typology: a fortified central residential block (*raj-kutir*) surrounded by high enclosure walls, service quarters (*bhandar*, stables), granaries, and ritual spaces associated with Binjhal *Kuthi Pooja* ceremonies. The original structure of the Ghens Zamindar Palace likely featured thick mud-and-stone walls, measuring 1.5 to 2 feet in thickness, with minimal openings to serve defensive purposes. A central courtyard (*angan*) was at the heart of the palace, used for family rituals and zamindari court proceedings, reflecting the social and administrative functions of the estate. The upper story of the palace was timber-framed, with thatched or early tile roofing, typical of pre-colonial Odia architecture. Surrounding the central block were peripheral service structures, including granaries, stables, and guard quarters, which supported the palace's day-to-day functioning and the agricultural activities of the zamindari estate. These elements together formed a robust, self-sustaining architectural complex that embodied both defense and administrative authority.

Under emerging colonial pressure (pre-1857), the palace may have begun incorporating hybrid modifications—plastered masonry, larger windows—typical of zamindari estates negotiating revenue settlements with British collectors. The Ghens Zamindar Palace represents "architecture of resistance" rather than collaboration, distinguishing it from later colonial institutional buildings like George High School (1914) or Christ the King Church (1931). Its partial destruction created a negative architectural imprint—where colonial power is legible through absence rather than presence of built form. This positions Ghens as Bargarh's ur-example of how colonial rule reshaped the built environment, not only through new construction but through targeted destruction of indigenous power centers. The Ghens Zamindar Palace serves as a key example of how colonial rule reshaped the built environment through targeted destruction of indigenous power centers, as detailed in Table 2.

Table 2: Ghens Zamindar Palace - Key Architectural and Historical Markers

Feature	Description	Colonial Significance
Construction Period	Early 19th century (pre-1857)	Pre-colonial zamindari typology
Location	Ghess village, 20-village estate	Strategic Sambalpur-Bargarh border
Key Figure	Madho Singh Bariha	1857 uprising leader
Fate	Destroyed post-1857	Colonial policy of exemplary punishment
Current State	Ruins/oral tradition	"Negative architecture" of resistance

Sources: Wikipedia: Ghess, Madho Singh (Ghess); Odisha Review: Role of Saheed Madho Singh
<https://en.wikipedia.org/wiki/Ghess>

d Bodasambar Rajbati of Padampur: Princely Architecture under Late Colonial Suzerainty

The Bodasambar Rajbati (also spelled Borasambar Rajbati), located at the heart of Padampur town in Bargarh district (coordinates approx. 21°00'N 82°41'E), represents the most elaborate surviving princely palace complex in Bargarh, constructed during the mature phase of British indirect rule (1899–1937). Unlike the destroyed Ghens Zamindar Palace (Section 1), which embodies violent colonial suppression, Bodasambar illustrates accommodation and hybridity—where a local raja adapted indigenous spatial traditions to colonial-era materials and administrative norms while retaining princely autonomy within the British paramountcy framework. Established as a semi-autonomous estate under the Sambalpur Agency, Bodasambar flourished under Raja Rajendra Singh Bariha (r. late 19th–early 20th century), who oversaw the Rajbati's phased expansion across 6 acres during a period when British political agents monitored princely spending and alliances. The palace served multiple functions: royal residence, darbar (court) for revenue collection, ceremonial center for tribal festivals, and defensive seat amid Binjhal-dominated territories linking Bargarh to Chhattisgarh.

The late-colonial timing of the Bodasambar Rajbati positioned it at the intersection of several significant architectural and political influences. It combined pre-colonial Odia palace typology, characterized by courtyards and hierarchical zoning, with British revenue oversight, a result of the post-1857 Permanent Settlement adaptations. Additionally, the palace incorporated princely modernization, with masonry upgrades that not only enhanced its durability but also served as a status symbol, reflecting the Raja's alignment with colonial norms while maintaining local autonomy. This blend of influences created a hybrid structure that reflected the complex relationship between traditional authority and colonial governance. The Rajbati comprises a semi-formal radial plan orbiting a central residential core, blending **indigenous functional zoning** with **colonial construction techniques**:

- **Anta-Pura:** Secluded zenana quarters with internal courtyards, verandahs
- **Darbar-Sal:** Colonnaded audience hall for petitions and British agent visits
- **Bhandar:** Fortified granary reflecting agrarian revenue base
- **Hati-Sal & Ghoda-Sal:** Elephant sheds and stables for ceremonial processions
- **Rani-Bandh:** Royal women's enclosure with private gardens/shrines
- **Akhada-Sal:** Martial training arena preserving warrior traditions
- **Raj-Ghat:** Pond-side royal bathing steps for rituals
- **Gambuj Tower:** Domed overlook above a menagerie pond (lions/cheetahs per local lore)

Table 3: Hybrid Material Palette:

Indigenous Element	Colonial Adaptation	Functional Purpose
Mud-brick base walls	Lime-plastered brick/stone masonry	Durability + prestige
Timber posts/beams	Arched brick lintels	Spacious interiors
Thatch roofing	Mangalore clay tiles	Weather resistance
Courtyard orientation	Larger glazed windows	Cross-ventilation

Source: <https://ijcrt.org/papers/IJCRT2302346.pdf>

The architectural evolution of Bodasambar Rajbati, as shown in Table 3, mirrors broader princely architecture trends across colonial India, where local rulers balanced loyalty with cultural

distinction. This synthesis mirrors broader princely architecture trends across colonial India, where local rulers commissioned "neo-vernacular" palaces to signal loyalty while asserting cultural distinction. Bodasambar Rajbati exemplifies "indirect rule materialized": the raja's ability to build elaborately (6 acres vs. Ghens' compact fort) reflects British tolerance of compliant princely houses post-1857, while standardized masonry and fenestration indicate engineering oversight by Sambalpur Division Public Works officers. The Darbar-Sal's scale accommodated colonial inspections, transforming the palace from tribal stronghold to mediatized court.

Table 4: Bodasambar Rajbati - Comparative Colonial Hybridity

Feature	Pre-Colonial Form	Colonial-Era Addition	Architectural Significance
Darbar Hall	Timber pavilion	Brick arches/columns	Accommodates British agents
Residential Core	Mud enclosure	Plastered multi-story	Status elevation
Service Wings	Thatched outhouses	Tiled stables/granary	Revenue administration hub
Defensive Role	Stockade walls	Symbolic gateways	Ceremonial rather than martial

Source: <https://ijert.org/papers/IJCRT2302346.pdf>

e Barpali Palace: Zamindari Adaptation to Colonial Revenue Systems

The **Barpali Palace** (also referenced as the zamindari residence of Barapali), situated in the historic town of Barpali/Barapali (coordinates approx. 21°13'N 83°36'E), Bargarh district, represents a transitional zamindari seat that survived colonial rule through strategic accommodation rather than resistance (Ghens, Section 1) or princely elaboration (Bodasambar, Section 2). Granted as *mau fi* (tax-free land) by Chauhan Raja Narayan Singh to Brahmin brothers Krishna Dash and Narayan Dash, Barpali evolved from a fortified agrarian outpost into a revenue-administrative hybrid under British oversight post-1849 annexation. Barpali's strategic location along ancient trade routes and near the Jeera River positioned it as a key revenue collection node within the Sambalpur tract after British consolidation via the Permanent Settlement.

Unlike the outright destruction of Ghens or the expansion of Bodasambar, the Barpali zamindars adapted strategically to colonial rule. They regularized land records with British collectors, hosted district officials in expanded reception spaces, and transitioned from martial to ceremonial authority. This compliance allowed the palace to remain intact, though it was modest in scale compared to other princely complexes, reflecting Barpali's status as a Brahmin *mau fi* grant rather than an autonomous zamindari. The palace follows the classic western Odisha courtyard typology, with incremental colonial upgrades that created a subtle hybrid in its current form. The central Angan (courtyard) was used for family rituals and informal darbars, while the Raj Bangla, a raised residential core, housed family shrines. The Bada Ghara, a public reception hall, was added post-colonial times to accommodate officials, and the service periphery included granaries, stables, and guard quarters along the enclosure walls, supporting the palace's agrarian function. The Barpali Palace, detailed in Table 5, exemplifies how compliance with colonial rule allowed the palace to remain intact and function as an administrative center while maintaining traditional elements.

Table 5: Material and Formal Evolution:

Phase	Indigenous Form	Colonial Upgrade	Significance
Pre-1849	Mud walls, thatch	-	Defensive agrarian seat
1850-1900	-	Brick infill, lime plaster	Revenue compliance
1900-1947	Timber verandahs	Arched openings, tiles	Administrative hybrid

Source: <https://en.wikipedia.org/wiki/Barapali>

The modest scale (under 2 acres) and gradual brickwork distinguish Barpali from Bodasambar's

6-acre sprawl, embodying "**petty zamindari pragmatism**"—practical adaptation without ostentatious display. Barpali Palace materializes **colonial indirect rule at the micro-level**: the *mau fi* grant's survival hinged on revenue productivity, transforming a Brahmin ritual-residence into a district outpost. Its intact state (unlike Ghens' ruins) reveals how compliant zamindars physically reoriented palaces toward colonial governance—larger public facades facing roads, inward courtyards preserved for tradition.

Table 6: Barpali Palace - Zamindari Progression Matrix

Marker	Ghens Comparison	Bodasambar Comparison	Colonial Architecture Role
Scale	Compact fort	6-acre complex	Modest revenue seat
Fate	Destroyed 1857	Intact/repurposed	Preserved through compliance
Hybridity	Minimal (destroyed early)	Elaborate princely	Incremental functionality
Current Use	Ruins/oral memory	Civic offices	Cultural landmark

Sources: Barapali - Wikipedia; Bargarh District History (Official); <https://en.wikipedia.org/wiki/Barapali>

f Satibhata Airstrip (Padampur): Post-Colonial Aerial Infrastructure

The Satibhata Airstrip (also Padampur Airstrip), located 6 km from Padampur town center in Purena village (coordinates: 21°02'24"N 83°02'19"E), Bargarh district, marks the post-colonial evolution of spatial control in the region—from zamindari palaces (Sections 1-3) to state-dominated aerial infrastructure. Originally a rudimentary World War II-era strip (unpaved, 41.76 acres), Satibhata currently supports small aircraft/helicopters and is slated for UDAN scheme development into a regional airport, extending colonial infrastructure logic into independent India's aviation grid. Established during WWII for military logistics supporting British operations in central India, Satibhata connected the Bodasambar princely tract (Section 2) to broader imperial networks via air relay. Post-1947, the Odisha State Government assumed control, maintaining it as a basic facility for agricultural/emergency flights serving Bargarh's 1.48 million population. The Satibhata Airstrip, shown in Table 7, completes the architectural arc of Bargarh's colonial evolution, replacing older British infrastructure with modern aerial systems, reflecting post-colonial state gigantism that inherits the territorial logic of the British: surveil, connect, and extract from peripheral zones like Padampur.

Table 7: Technical Specifications and Colonial Continuity: Current Infrastructure

Feature	Specification	Colonial Legacy
Runway	Unpaved; small aircraft only	WWII military logistics
Land Area	41.76 acres (+19.22 planned)	State acquisition post-1947
Ownership	Odisha State Govt.	Successor to British airstrips
Connectivity	137 km to Raipur; 81 km to Bargarh	Regional integration hub

Source: https://en.wikipedia.org/wiki/Satibhata_Airstrip

The Satibhata Airstrip's linear runway design contrasts with the traditional courtyard palaces but continues the colonial spatial strategy by transforming peripheral territories, like Padampur's Binjhal heartland, into controlled nodes—first through revenue (zamindari), then via roads/rail (Jeera Bridge), and now air. It completes the architectural arc of Bargarh's colonial evolution: Ghens (1857) represented destroyed resistance, Bodasambar and Barpali showcased hybrid accommodation for revenue administration, George High School and Christ the King Church symbolized institutional control, and Satibhata exemplifies aerial infrastructure for total spatial mastery. The airstrip reflects post-colonial state gigantism, where Nehruvian/UDAN aviation replaces British-era bridges and

schools while inheriting their territorial logic: surveil, connect, and extract from peripheral zones like Padampur.

Table 8: Satibhata Airstrip - Infrastructure Evolution

Era	Structure Type	Spatial Control Mechanism
Pre-1947	Zamindari palaces	Grounded revenue extraction
1937	Jeera Bridge	Road connectivity
2023+	Satibhata Airport	Aerial integration
Current Status	Operational (helicopters); UDAN development	Bargarh District's air gateway

Sources: Wikipedia: Satibhata Airstrip; AAI National Register; UDAN expansion plans; https://en.wikipedia.org/wiki/Satibhata_Airstrip

Colonial architecture in Bargarh, such as George High School, Christ the King Church, and the Ghens Zamindar Palace, blends European styles with local adaptations to serve both functional and ideological purposes. These buildings symbolize British control over education, religion, and local power, with the Ghens Palace standing as a symbol of resistance. Together, they reflect the dual role of colonial architecture in reinforcing authority and integrating local environments.

7. Infrastructure and Engineering

During the British colonial period, infrastructure projects were pivotal in strengthening control and facilitating the flow of goods and services across India. The development of transportation networks, including railways, roads, and bridges, was particularly essential for ensuring that trade could flow freely between India's eastern ports and western markets. These infrastructure projects helped integrate India's regional economies and support the British colonial administration's economic objectives.

a. The Jeera Bridge and NH6

One of the most significant infrastructure projects in Bargarh during the colonial period was the Jeera Bridge (also known as Junha Pulia), which was completed in 1937. This critical iron-truss bridge served as a lifeline for Bargarh and its surrounding regions, facilitating movement and trade across the Jeera River. The Jeera Bridge was part of the Great Eastern Road (National Highway 6), a key route connecting the eastern city of Kolkata with Mumbai in the west. This road, and by extension the Jeera Bridge, were vital for commercial and administrative connectivity, allowing for the easier transportation of goods, military personnel, and trade resources. The bridge was designed to withstand seasonal flooding and carry heavy loads, reflecting the British emphasis on infrastructure to sustain their economic and military interests in India.^{xxx} The Jeera Bridge remained an essential part of Bargarh's infrastructure until recent years when it was replaced by a modern, 290-meter concrete structure. Despite the modernization, the Jeera Bridge's legacy remains a testament to the colonial emphasis on improving connectivity, facilitating regional integration, and ensuring the smooth transportation of goods across India. The bridge's ability to withstand seasonal flooding was also a reflection of the British approach to solving local environmental challenges with innovative engineering solutions, incorporating advanced techniques from the West while adapting to the unique conditions of India's tropical climate.^{xxxii}

b. Modern Public Buildings: The 1993 Transformation

The elevation of Bargarh to a separate district in 1993 marked a turning point in its urban development. This transformation necessitated the rapid expansion of civic infrastructure to meet the administrative, educational, and social needs of a growing district. Following the district's formation, several modern public buildings were constructed to serve the needs of Bargarh's citizens, marking the transition from colonial-era structures to more contemporary, functional designs.

b.1. District Collectorate

The District Collectorate serves as the administrative headquarters of Bargarh, and its construction reflects the modernization of the district's civic infrastructure. This multi-story, contemporary building covers over 1.4 lakh square feet and is designed with a focus on utilitarian scale and accessibility. The design of the Collectorate building is aimed at improving service delivery by incorporating wide public corridors and centralized departments that allow for efficient governance and public administration. The modern design also includes large windows for natural light and ventilation, ensuring a comfortable environment for both administrative staff and visitors. This building not only serves as a symbol of the modern administrative era in Bargarh but also emphasizes efficiency, transparency, and public service—qualities that have become central to the functioning of local governments in India.

c. Panchayat College (1960)

Established through community donations of land and cash, Panchayat College is another important institution in Bargarh's educational landscape. Located on a 50-acre campus, the college's design is inspired by mid-20th-century institutional modernism, which emphasizes functionality and the efficient use of space. The campus is surrounded by natural beauty, with Eucalyptus trees lining the grounds and lush paddy fields bordering the area. This serene environment provides a conducive atmosphere for learning and represents the community's commitment to education.^{xxxiii} The architectural design of the original structure, inaugurated by Chief Minister Hare Krushna Mahatab, features high-ceilinged classrooms and long verandahs, which allow for natural cooling—a crucial consideration in Odisha's hot and humid climate. The design of Panchayat College also reflects the post-independence emphasis on building educational institutions that are both modern and rooted in the local context. The college's campus has expanded over the years to accommodate the growing number of students and to keep pace with the demands of modern education.

d. District Museum in Gandhi Smriti Pathagara

The District Museum, relocated to its current location in Gandhi Smriti Pathagara in 1997, serves as a repository for Bargarh's rich historical and cultural heritage. The museum showcases the region's diverse history through an array of artifacts that span several centuries, reflecting the different aspects of life in Bargarh—from its medieval Saivite influence to the colonial period and beyond.^{xxxiv} Gandhi Smriti Pathagara, established in 1969, is a significant site for the preservation of the region's cultural heritage. The museum not only preserves the past but also serves as an educational tool, offering insights into the history, traditions, and customs of the district. The collection includes a range of artifacts, including archaeological finds, textiles, and military objects, as well as photographs that celebrate the lives of regional luminaries and revolutionary leaders.

Table 9: Inventory of Categories in the Bargarh District Museum

Gallery	Notable Artifacts	Historical Context
Archaeology	Uma-Maheswara, Siva-Parvati, sitting bull (Brushava), Nayika figures	Highlights medieval Saivite influence in South Kosala.
Armoury	Ancient swords, battle axes, guns, bows and arrows	Reflects the military traditions of regional freedom fighters like Veer Surendra Sai.
Textile	Charakha, manga, Dungi, Varana, Aren (weaving tools)	Documents the late medieval origins of Sambalpuri Tie and Dye fabrics.
Wooden Materials	Wooden Cycle, horse-riding figures, traditional toys	Unique collection of local craftsmanship that attracts high visitor engagement.
Photographs	Portraits of Parvati Giri, Gangadhar Meher, Bhagirathi Pattanaik	Honors the district's revolutionary and literary luminaries.

Source: Data Compiled by the Researcher

Table 9 provides a detailed inventory of categories in the Bargarh District Museum, showcasing a variety of artifacts that highlight the district's rich cultural, historical, and artistic heritage. The Archaeology Gallery features notable pieces like Uma-Maheswara, Siva-Parvati, a sitting bull (Brushava), and Nayika figures, offering a glimpse into the medieval Saivite influence in South Kosala, reflecting the religious and cultural importance of the region during this period. The Armoury Gallery houses ancient swords, battle axes, guns, and bows and arrows, emphasizing the military traditions of the region, especially those of the regional freedom fighters like Veer Surendra Sai, who played a key role in resisting British colonial rule.

In the Textile Gallery, artifacts such as Charakha, manga, Dungi, Varana, and Aren (weaving tools) document the late medieval origins of Sambalpuri Tie and Dye fabrics, a craft that is now globally recognized. The Wooden Materials Gallery contains a unique collection of local craftsmanship, including a Wooden Cycle, horse-riding figures, and traditional toys, all of which attract high engagement from visitors due to their craftsmanship and cultural significance. The Photographs Gallery honors the district's revolutionary and literary luminaries, showcasing portraits of influential figures like Parvati Giri, Gangadhar Meher, and Bhagirathi Pattanaik. These figures played significant roles in the cultural and political life of the region, and their portraits reflect the district's deep connection to its intellectual and revolutionary history. Together, the museum's inventory offers a comprehensive view of Bargarh's past, from its religious and military traditions to its artistic and literary contributions.

8. Health and Humanitarian Structures: Catholic Mission Hospital

The Catholic Mission Hospital in Tora, Bargarh, stands as a cornerstone of healthcare in the region, particularly for the rural areas of western Odisha. Founded by missionaries in the early 20th century, the hospital has played an instrumental role in providing medical care to a region that historically lacked sufficient healthcare infrastructure. At its inception, the hospital's purpose was not only to offer medical services but also to act as a center for social reform and welfare under the guidance of Catholic missionaries, who were dedicated to improving the health and well-being of the local population. Today, the hospital continues to serve as a vital healthcare resource, with its long-standing commitment to offering accessible and compassionate care.^{xxxv}

a. Architecture and Design

The Catholic Mission Hospital was built following the principles of 19th-century missionary architecture, which was primarily focused on functionality, natural ventilation, and sustainability in tropical climates. Missionary architecture often prioritized basic, practical designs that could be easily replicated in rural areas, while also addressing the challenges posed by India's hot and humid conditions. The hospital's layout centers around a spacious open courtyard, a feature that was common in many colonial-era buildings and traditional Indian architecture. This design serves multiple purposes: it maximizes the amount of natural light that enters the building, which was critical for patient health, and it enhances air circulation, helping to cool the building naturally. This open courtyard was particularly important for managing infectious diseases—a major concern during the colonial period, when sanitation and disease prevention were key health challenges. The central courtyard also provided a social space for patients and staff, encouraging social interactions and promoting a sense of community and well-being.^{xxxvi} The building's high ceilings and wide verandahs are other key architectural features typical of colonial healthcare facilities. These elements were incorporated into the design to promote natural cooling. In the tropical climate of Odisha, these architectural choices were essential for maintaining a comfortable and healthy environment in the hospital. The verandahs not only facilitated the movement of air throughout the building but also provided spaces where patients could rest, socialize, or receive visitors, further fostering a sense of community. This design approach reflects the missionary commitment to holistic care, addressing both the physical and emotional needs of the community.

b. Sustainability and Adaptation to Local Climate

The hospital's design demonstrates an understanding of local environmental conditions and a commitment to sustainability. The use of natural ventilation and the creation of shaded outdoor spaces helped mitigate the effects of extreme heat and humidity, both of which could exacerbate health conditions in the region. The wide verandahs and high ceilings also contribute to reducing the need for artificial cooling, making the building more energy-efficient and sustainable over time.^{xxxvii} Additionally, the materials used in the construction of the hospital were chosen with the local climate in mind. The building's thick walls and high openings were designed to allow for passive cooling, reducing reliance on external energy sources for temperature regulation. This thoughtful integration of architectural design with the region's environmental conditions reflects a deep understanding of sustainable building practices, which was a hallmark of missionary architecture during this period.

c. Modern Expansion

As Bargarh and its surrounding areas have developed, the hospital has undergone significant modernization to meet the growing healthcare needs of the region. Over the years, specialized units such as a blood bank, advanced diagnostic labs, and ICU facilities have been added to the hospital's infrastructure. These modern additions ensure that the hospital can continue to provide high-quality care in line with contemporary medical practices.

Despite these modern updates, the hospital's historical integrity has been carefully preserved. Many of the original architectural features, such as the arched verandahs, which were initially constructed for cross-ventilation, remain intact. This attention to preserving the hospital's colonial aesthetic not only gives the building a sense of continuity but also reflects its historical importance as a center of healthcare in the region. The verandahs, for instance, continue to serve their original purpose of improving air circulation, while offering space for social interactions and rest, which are still important aspects of patient care today.^{xxxviii}

The hospital's combination of colonial-era architecture with modern healthcare facilities creates a unique blend of the past and present. This balance allows the institution to maintain its historical and cultural significance while adapting to the evolving needs of its patients. The hospital's ability to blend traditional architectural forms with modern medical advancements serves as a model for other institutions in the region that aim to preserve cultural heritage while embracing the future.

d. A Legacy of Healthcare and Service

The Catholic Mission Hospital is not just an architectural landmark but a living testament to the impact of missionary efforts on healthcare in rural India. Through its blend of practical architecture, sustainable design, and modern medical facilities, it has become a symbol of compassionate care and community service. Its continued success and relevance in the 21st century highlight the lasting value of integrating functional design with social mission.^{xxxix} The hospital's influence extends beyond healthcare—it has become a place of cultural significance, where the local community gathers, not only for treatment but for shared moments of interaction and support. As one of the few healthcare institutions in the area that combines historical charm with modern medicine, the Catholic Mission Hospital remains a vital part of the region's infrastructure, providing an essential service to a population that would otherwise be underserved.

9. Industrial and Cooperative Architecture

The architectural landscape of Bargarh has undergone significant changes since India's independence, as the district transitioned from an agrarian society to a more industrialized and cooperative economy. This shift is closely tied to the growth of large-scale industrial units and the success of the cooperative movement, both of which have shaped the region's architectural identity. Post-independence, these developments not only redefined the economic and social fabric of Bargarh

but also influenced the design and functionality of its industrial and cooperative infrastructure.^{xi}

a. ACC Bargarh Cement Plant (1968)

The ACC Bargarh Cement Plant, established in 1968, is an iconic example of industrial brutalism—a style of architecture characterized by its raw concrete form and functionality, which was especially prominent during the mid-20th century. This monumental plant spans over 1,121.67 acres, making it one of the largest cement plants in the region and a critical factor in Bargarh's industrial and infrastructural growth. The plant is designed to accommodate large-scale cement production, which has played a vital role in driving the region's economy and providing the necessary materials for the development of Bargarh and surrounding areas.

a.1. Key Components and Architectural Features

The plant's architecture is dominated by massive reinforced concrete silos and kiln structures, typical of the brutalist industrial design, which emphasizes utilitarian function over ornamentation. These towering structures are designed to serve the plant's core function: the storage and processing of raw materials for cement production. Despite their functional purpose, they also stand as symbols of industrial progress in Bargarh, marking the district's transformation from an agricultural hub to an industrial powerhouse.^{xii} The layout of the plant is highly specialized and designed for efficiency. One of the most remarkable aspects of the ACC Cement Plant is its direct connectivity to the Dungri Limestone Quarry via a specialized 43 km meter-gauge railway line. This logistical design was a pioneering feature at the time, ensuring the smooth and efficient transportation of raw materials such as limestone to the plant for processing. The railway line was integral in maintaining a constant supply of materials, which allowed for the continuous operation of the plant and supported the scale of industrial activity in the region.

a.2. Infrastructure and Social Impact

The ACC Cement Plant is not just an industrial unit but also an important part of the community. The plant includes an employee township and a captive power plant, both of which were integral to the company's "Village Welfare Scheme." This scheme was designed to promote the well-being of plant workers and their families by providing them with affordable housing, access to services, and a stable living environment. The layout of the township emphasizes the idea of self-sufficiency within the plant's community, creating an environment that supported both industrial efficiency and social welfare. This focus on community development helped foster a more sustainable industrial environment, where workers could live in proximity to their place of employment, reducing commuting time and improving overall quality of life.^{xiii} The ACC Bargarh Cement Plant serves as a lasting example of industrial architecture that blends functionality with social responsibility, highlighting the importance of worker welfare in the broader context of industrial development.

b. Bargarh Cooperative Sugar Mill Limited

The Bargarh Cooperative Sugar Mill Limited stands as another significant example of industrial architecture in the region, emblematic of the post-independence cooperative movement in Odisha. Established in the mid-20th century, the mill was central to transforming Bargarh into the "Rice Bowl of Odisha", as it facilitated the processing of large quantities of sugarcane, a key agricultural product in the area. The design of the mill is purely functional, optimized for processing agricultural products and supporting local farmers, making it a vital part of the cooperative movement that emerged in the region.

b.1. Functional Architecture and Cooperative Philosophy

The architecture of the Bargarh Cooperative Sugar Mill reflects its purpose-driven design. The mill's layout is pragmatic, with large open spaces and robust structures that accommodate the extensive machinery required for sugarcane processing. The design prioritizes efficiency, ensuring that the mill

could handle the high volumes of sugarcane brought in from local farms. The building's structure is straightforward and practical, designed to facilitate the smooth movement of goods from agricultural transport networks to the plant. The mill's layout integrates seamlessly with local agricultural transport systems, ensuring that sugarcane could be efficiently delivered from farms to the mill for processing, further enhancing productivity and reducing delays in production.^{xliii} The cooperative philosophy underlying the Bargarh Cooperative Sugar Mill is reflected in its design, which emphasizes collaboration and community benefit. The mill was built to serve the needs of local farmers, allowing them to collectively control the processing of their crops and ensuring that the benefits of industrial production were distributed among the community. This approach fostered collaborative efforts and increased agricultural productivity, contributing significantly to the economic development of Bargarh.^{xliv} The mill played a key role in Bargarh's transformation from a primarily agricultural economy to one that integrated industrial processes through cooperative enterprises. It helped create a model where local farmers were not only suppliers of raw materials but also stakeholders in the processing and marketing of their produce.

b.2. Impact on Bargarh's Urban and Architectural Landscape

The emergence of large-scale industrial plants like the ACC Bargarh Cement Plant and the Bargarh Cooperative Sugar Mill had a profound impact on the urban and architectural landscape of Bargarh. These industrial units prompted the development of modern infrastructure, such as housing colonies for workers, administrative buildings, and transportation networks. The establishment of these plants also led to an increased demand for specialized industrial facilities, which in turn influenced the architecture of the region. Industrial architecture in Bargarh became characterized by large-scale factories, reinforced concrete structures, and efficient layouts that emphasized functionality.^{xlv} Additionally, the cooperative movement in Bargarh encouraged the growth of community-oriented infrastructure, where industrial units were not merely economic centers but also hubs of social welfare. This focus on worker welfare and community development has had lasting effects on the architectural design of Bargarh, which has integrated industrialization with the goal of improving quality of life for its residents. This development also led to the creation of supporting infrastructure such as schools, hospitals, and marketplaces, all of which were necessary to meet the needs of the growing industrial workforce.^{xlvi} The cooperative movement and the industrial boom in Bargarh thus marked a significant shift in the district's architectural identity, moving from a traditional agricultural-based economy to an industrialized one, with a focus on both productivity and social welfare.

10. Findings

The architectural evolution of Bargarh is a testament to its dynamic socio-political, economic, and cultural transformation over the centuries. From its origins as a medieval fortified settlement under the Chauhan dynasty to its colonial-era reimagining with Indo-European institutional buildings, Bargarh's built environment reflects the shifting priorities and influences that have shaped the region. The colonial period brought about significant infrastructural changes, such as the construction of schools, churches, and vital bridges, that aligned with British administrative needs and facilitated regional integration into the imperial economy. The Jeera Bridge and institutions like George High School and Christ the King Church encapsulate the British effort to both assert control and integrate India into a globalized system of trade, governance, and culture.

Post-independence, Bargarh's architectural landscape was further shaped by the rise of industrialization and the cooperative movement. The construction of large-scale industrial units, such as the ACC Cement Plant and Bargarh Cooperative Sugar Mill, marked the district's transition from an agrarian economy to an industrialized hub. These industrial structures not only facilitated economic growth but also integrated worker welfare into their design, as seen in the employee township and village welfare schemes. Additionally, modern administrative buildings like the District Collectorate and District Museum, established after Bargarh became a separate district in 1993, represent the region's shift to a more contemporary, efficient infrastructure that blends historical and modern elements. Together, these findings highlight Bargarh's evolution as a microcosm of broader regional

and national transformations, where architecture serves both functional and symbolic purposes, shaping and reflecting the district's changing identity.

11. Conclusion

The architectural evolution of Bargarh District serves as a physical record of its transition from a medieval Chauhan stronghold to a modern industrial and administrative center. The imprints of colonial rule are visible in the symmetrical brick facades of George High School, the iron trusses of the old Jeera Bridge, and the arched verandahs of missionary hospitals. These structures introduced modern materials and institutional designs that bridged the gap between the feudal past and the industrial present. Following the district's formation in 1993, the rise of modern public buildings like the District Collectorate and the District Museum has solidified Bargarh's administrative identity. Meanwhile, the industrial giants like the ACC Cement Plant and the cooperative mills reflect the district's economic resilience. Together, these layers of architecture—temples, forts, schools, and factories—create a diverse cultural landscape that continues to support the district's unique festivals and vibrant communal life. Bargarh remains a testament to how architectural heritage can be repurposed and expanded to meet the changing needs of a society while maintaining its historical core.

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