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ARCHITECTURAL IDENTITY OF KANO, NIGERIA: EVALUATION AND CATEGORISATION

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Abstract

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This study investigates the evolution of Kano's architecture, identifying key influences such as Hausa traditions, Islamic planning pre-colonial forms, colonial interventions, and recent commercial expansion. It classifies architectural styles in Kano by form, building materials, and scale, highlighting significant trends and contributing factors. The research utilises a systematic literature review to synthesise existing scholarship, conducts archival research to analyse historical documents and plans, and undertakes direct field observations to document current architectural conditions. The study finds that the architectural identity of Kano is currently defined by a conflict between the superior climatic performance of vernacular traditions and the aspirational symbolism of modern vertical urbanism. This unresolved tension has resulted in environmentally inefficient buildings, the erosion of cultural heritage, and the progressive loss of indigenous construction knowledge. Thus, the study recommends that the Kano State Government should enact a demolition review statute requiring mandatory public impact assessments before any historic structure particularly those over 50 years old within the old city can be altered or demolished; incentive zoning mechanisms should be introduced to encourage developers to adopt conservation-oriented and climate-responsive design strategies; and Kano State Government should promote the use of compressed-earth blocks in public housing and institutional projects.

Keywords: *Architecture, Cultural Heritage, Planning, Modernization, Kano, Critical Regionalism.*

Introduction: The Rationale for Kano as a Case Study

Cities function as dynamic repositories of cultural memory, preserving and transmitting social values, historical experiences, and environmental knowledge through their built forms. Architecture, in this sense, operates not merely as shelter or infrastructure but as a spatial record of collective identity and adaptive practices accumulated over time. Kano, one of West Africa's oldest continuously inhabited cities and a millennium-old centre of trans-Saharan trade, offers a particularly compelling case through which to examine these dynamics. Its urban landscape operates as a living archive, where traditional Hausa mud dwellings, Islamic-era compounds, colonial planning interventions, and contemporary high-rise developments coexist within a rapidly transforming metropolitan environment (Barau *et al.*, 2025).

The architectural fabric of Kano reflects successive layers of political authority, religious influence, and economic integration. Indigenous Hausa construction traditions, refined through Islamic cultural norms, produced climate-responsive courtyard compounds and richly ornamented earth architecture. These forms were later intersected by colonial-era grid systems and administrative buildings, followed by post-independence modernist and contemporary structures driven by population growth, globalisation, and real estate speculation. This

juxtaposition of architectural typologies within a single urban setting makes Kano an exceptional laboratory for studying how architectural identity is negotiated over time (Mba, *et al.* 2025).

Although Kano's historical and cultural significance is well documented, recent scholarship increasingly points to the vulnerability of this architectural heritage under conditions of accelerated urbanization. Rapid population growth, rising land values, and aspirational modernization have intensified redevelopment pressures, particularly within the historic core. As a result, traditional compounds and artisanal construction techniques are being replaced by concrete and glass structures that often disregard local climatic conditions and cultural logics (Mba, *et al.* 2025).

Current literature highlights a critical tension shaping Kano's architectural transformation: the uneasy relationship between modernisation and heritage preservation. Umar (2019) and Yusuf (2023) demonstrate that while modernization initiatives contribute to economic expansion and urban densification, they frequently undermine indigenous knowledge systems, erode artisanal craftsmanship, and weaken the social networks embedded within traditional residential compounds. These transformations are not merely aesthetic; they have profound implications for thermal comfort, social cohesion, and long-term urban sustainability.

Despite this growing body of work, there remains a notable gap in the literature. Existing studies tend to examine heritage conservation, urban growth, or architectural change in isolation, with limited attention to how different architectural typologies perform in relation to climatic resilience. In a Sahelian context characterised by high temperatures and increasing climate stress, this omission is particularly significant. The failure to systematically compare vernacular and modern building forms in terms of environmental performance limits the capacity of policy and design interventions to respond effectively to contemporary urban challenges. This study addresses that gap by analyzing Kano's architectural identity through the interplay of climate, culture, and historical forces.

Literature Review

Existing scholarship on Kano's built environment consistently categorises its architectural evolution into three broad typologies-Hausa Vernacular, Colonial Interventions, and Contemporary Modernism each revealing unique performance strengths and weaknesses in climatic, socio-cultural, and spatial terms.

Hausa Vernacular Architecture. Traditional Hausa architecture in Kano is characterised by tubali (sun-dried adobe) walls, internal courtyards, and locally sourced materials, forms widely documented as climatically responsive and socially embedded. Passive strategies such as thick earthen walls and courtyards buffer interiors from extreme diurnal temperatures, reducing reliance on mechanical cooling and contributing to enhanced thermal comfort in hot, dry climates. Studies demonstrate that vernacular forms in West Africa achieve effective passive cooling, with earthen materials providing high thermal mass that moderates indoor conditions, a key principle in sustainable design for arid regions (Barau *et al.*, 2025). These features also align with socio-cultural norms of privacy and communal living inherent in Hausa society, reinforcing the cultural legitimacy of traditional spatial arrangements. However, literature notes that this typology's vulnerability to environmental degradation, particularly under increasing climate variability, and the high maintenance demands associated with mud structures challenge its viability in rapidly urbanising contexts, leading to gradual erosion of vernacular practice (Umar *et al.*, 2019).

Colonial Interventions. The British colonial administration's arrival in Kano in the early 20th century introduced orthogonal grid patterns, zoning regulations, and segregated neighbourhoods that restructured Kano's urban morphology. Colonial urban planning prioritised administrative

control and formal infrastructure over the organic settlement patterns of the pre-colonial city, creating Government Reserved Areas (GRAs) that reflected Western spatial logics (Barau *et al.*, 2025). These interventions are widely acknowledged to have altered both physical form and socio-spatial organisation, facilitating institutional infrastructure while disentangling integrated indigenous socio-spatial systems and privileging colonial quarters. Colonial typologies often lacked the climatic sensitivity of indigenous practices, as imported materials and construction methods were not optimally suited to local environmental conditions (Nasidi, 2024).

Contemporary Modernism and Vertical Urbanism. In recent decades, Kano has experienced significant vertical expansion, with contemporary concrete-and-glass towers such as the Skyline University Tower and new commercial complexes reshaping the city's skyline. Scholars describe this trend as "vertical urbanism," a symbolic articulation of economic growth and global connectivity. While these forms signify investment and modernisation ambitions, critical analyses highlight significant climatic maladaptation in the Sahelian context, where extensive glazed façades lead to high solar heat gain and increased reliance on mechanical cooling. Research on emergent vertical growth in Kano demonstrates that the proliferation of multistorey structures disrupts traditional courtyard forms rooted in Islamic and climatic design principles, leading to the loss of heritage buildings and contributing to aesthetic homogenisation. This literature emphasises that contemporary typologies frequently overlook indigenous spatial logics and socio-cultural meanings embedded in vernacular forms, creating cultural dissonance and undermining both environmental and social sustainability (Barau *et al.*, 2025).

Theoretical Framework

This study adopts Critical Regionalism as its primary theoretical framework, drawing originally from Kenneth Frampton's seminal formulation (Frampton, 1983) and subsequent refinements in architectural discourse. Critical Regionalism emerged as a response to the homogenising tendencies of modernist and globalised architecture, advocating for design approaches that are rooted in local culture, climate, materiality, and topography, while remaining open to contemporary technological and social demands. Rather than rejecting modernity outright, the theory seeks to mediate between universal civilisation and local particularities, positioning architecture as a culturally situated and environmentally responsive practice.

Within this framework, architecture is understood not merely as an aesthetic expression, but as a tectonic and experiential response to place engaging factors such as climate, light, construction methods, and socio-cultural practices. Recent scholarship has reaffirmed the relevance of Critical Regionalism in Global South contexts, particularly in cities experiencing rapid urbanisation and the influx of imported architectural models that often disregard local environmental conditions (Canizaro, 2020). In such settings, the theory provides a critical lens for evaluating how global architectural trends intersect often problematically with indigenous spatial systems.

In the context of Kano, Critical Regionalism offers a useful analytical framework for interrogating the uncritical importation of generic glass-and-steel architectural typologies that have increasingly come to dominate commercial and institutional development. These forms, while symbolically associated with progress, efficiency, and global integration, frequently exhibit poor climatic performance in the Sahelian environment, resulting in excessive heat gain and heavy dependence on mechanical cooling systems. Applying Critical Regionalism allows this study to critique such developments not simply as stylistic choices, but as contextually misaligned interventions that undermine environmental sustainability and cultural continuity.

The framework further supports a conceptual shift toward what this study terms "sustainable modernisation", closely aligned with contemporary interpretations of Vernacular Modernism. Recent literature describes Vernacular Modernism as an approach that hybridises indigenous construction knowledge with modern materials and technologies, producing architecture that is

both culturally grounded and technologically adaptive (Oliver, 2019). In African urban contexts, scholars argue that this hybridisation offers a pragmatic pathway for addressing climate change, housing demand, and identity preservation simultaneously (Salama, 2021).

Thus, by adopting Critical Regionalism, this study situates Kano's architectural transformation within a broader theoretical debate on place-based design, environmental responsiveness, and cultural resilience. The framework enables an evaluation of architectural typologies not only in terms of form and symbolism, but also through their climatic performance, material logic, and socio-cultural relevance.

Historical and Urban Context

Kano's history directly informs the development of its city and architecture. The city originated from early settlements around Dalla Hill, selected for its sacred significance and defensive advantage, which formed the nucleus of Kano's earliest urban development (Iliffe, 2007). From this core, Kano expanded into a fortified city enclosed by extensive earthen ramparts known as the ganuwa. Constructed between the 10th and 14th centuries, these walls served defensive, ceremonial, and administrative functions, shaping the spatial organisation of the city and regulating economic activity (UNESCO, 2007).

Under the reign of Muhammadu Rumfa (c. 1463–1499), Kano experienced major political and urban transformations. The construction and expansion of the Emir's Palace (Gidan Rumfa) and the establishment of Kurmi Market consolidated political authority and commercial power, reinforcing Kano's role as a regional economic hub within trans-Saharan trade networks (Archnet, 2020; UNESCO, 2007).

The introduction of Islam into Kano from approximately the fourteenth century marked a decisive turning point in the city's urban form and architectural identity. Islam entered Kano primarily through trans-Saharan trade and scholarly exchange, rather than military conquest, gradually reshaping political authority, social organisation, and spatial planning (Britannica, 2023). Its institutional consolidation under Muhammadu Rumfa entrenched Islamic norms as a guiding framework for governance and urban development, fundamentally redefining Kano's architectural landscape (Archnet, 2020).

One of the most significant spatial impacts of Islam was the reorganisation of Kano around religious and administrative institutions. The construction and expansion of mosques particularly the central congregational mosque (Masallacin Juma'a) introduced new urban focal points that structured daily movement, ritual practice, education, and legal arbitration. Mosque complexes functioned as centres of worship, learning, and communal governance, reinforcing Islam's integrative role within the urban fabric and contributing to a nodal city structure where religious, political, and economic functions converged (Britannica, 2023).

Islam also profoundly influenced residential architecture and settlement patterns in Kano. Islamic principles emphasising privacy, modesty, and gendered spatial separation informed the development of inward-looking courtyard compounds with limited street-facing openings. Architectural elements such as high perimeter walls, screened entrances, and hierarchical internal spaces reflected Islamic social norms while remaining fully compatible with indigenous Hausa construction techniques and climatic adaptations. Rather than displacing vernacular practices, Islam catalysed their refinement and formalisation (Umar, 2019).

Decorative and symbolic aspects of Kano's architecture were similarly transformed. Islamic aesthetics promoted non-figurative ornamentation, including geometric and calligraphic motifs, which became most visible in zane plasterwork applied to façades, doorways, and interior walls. These decorative practices conveyed religious identity, social status, and moral order, while

situating Kano within the broader Islamic architectural tradition of the Sahel and Sahara (Umar, 2019).

At the urban scale, Islamic governance contributed to the institutional ordering of space through the integration of palaces, markets, and religious institutions. The Emir's Palace exemplifies this synthesis by combining political authority with Islamic legitimacy and spatial hierarchy, while Kurmi Market evolved under Islamic administration as a regulated commercial centre aligned with ethical trade principles (Archnet, 2020).

Overall, the coming of Islam did not produce a rupture in Kano's architectural development but rather a process of transformation and synthesis, fusing Islamic spatial principles with indigenous Hausa construction traditions. This synthesis laid the foundations of Kano's enduring architectural identity and continues to shape contemporary debates on heritage preservation, modernisation, and urban sustainability (Umar, 2019).

In the early twentieth century, British colonial rule introduced new architectural styles and planning systems, including zoned districts and grid-iron street layouts, which altered parts of the city at the neighbourhood scale. Following independence, Kano expanded further at the metropolitan scale with the establishment of universities, hospitals, and administrative institutions, alongside rapid population growth and housing demand. Today, Kano is a megacity of over four million inhabitants, yet its historic core continues to display layered evidence of precolonial, colonial, and postcolonial architectural forms (Mba, 2025).

Architectural Typologies in Kano

Hausa Traditional Architecture

Kano's predominant traditional architecture is the Hausa vernacular style, defined by the use of sun-dried adobe bricks (tubali), rammed earth, and timber. Homes are typically organised around a multifunctional central courtyard, providing privacy, security, and thermal comfort. Substantial earthen walls offer passive cooling and climatic adaptation. Traditional roofs used palm ribs, thatch, or mud, but contemporary practice increasingly employs corrugated iron for durability.

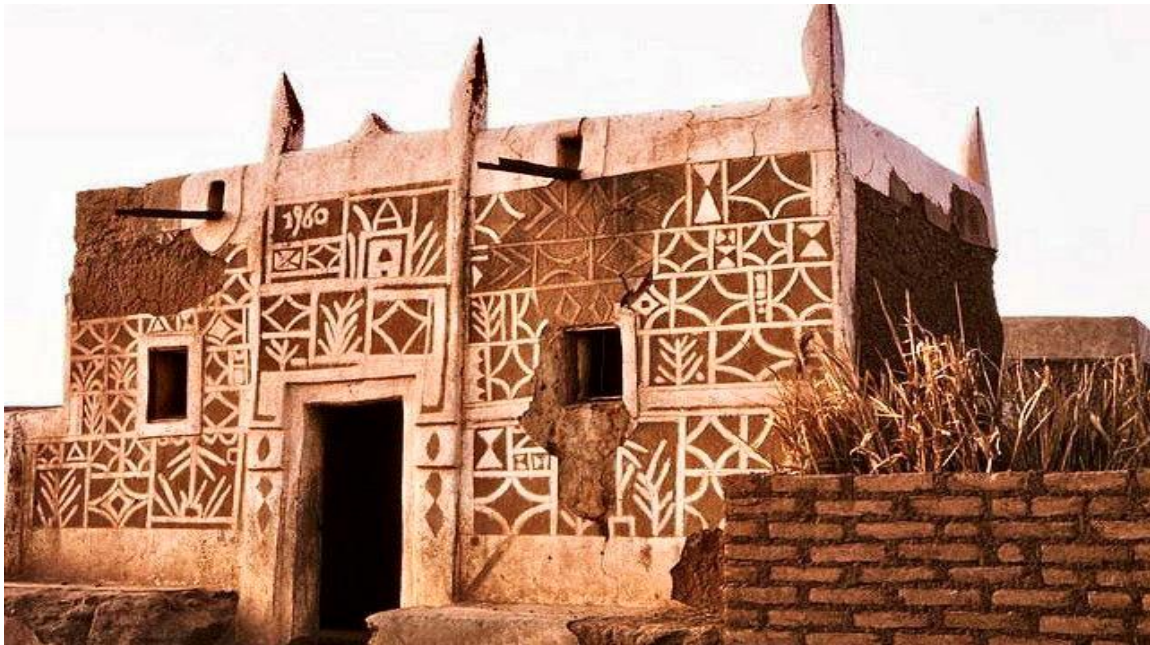


Figure 1: Hausa Architecture from Northern Nigeria

A key feature of this style is zane, a decorative plasterwork with geometric and floral Islamic designs, used on walls, doorways, and niches. The amount and detail of this decoration showed a family's social status, with wealthier families having more elaborate facades. The traditional Hausa compound was more than just a building; it was a centre for extended families and small craft businesses (Umar, 2019).

This sustainable building tradition faces challenges from maintenance demands, urbanisation, and changing social preferences for modern designs, which imperil the continuity of traditional building skills. For example, recent redevelopment projects in Kano's old city have frequently replaced historic mudbrick compounds with concrete apartment blocks, resulting in the loss of artisanal plasterwork techniques and a decline in the number of craftsmen skilled in traditional methods (Yusuf, 2023).

Kano's city walls, built between the 10th and 14th centuries and stretching 14 kilometres, illustrate the city's historic fortifications. Their gates regulated commerce, security, and ceremonial events, cementing their urban and symbolic importance.



Figure 2: Ancient Kano City Walls in Gaen

Despite ongoing deterioration, the remaining sections of the walls stand as powerful symbols of Kano's identity and are being considered for UNESCO World Heritage status.

The Emir's Palace (Gidan Rumfa)

Constructed in the 15th century during the reign of Sarki Muhamadu Rumfa, the Emir's Palace is an extensive complex that serves administrative, residential, and ceremonial functions. Its gates, courtyards, and halls exemplify the grandeur of Hausa-Islamic architectural traditions. Over time, the palace has undergone multiple renovations and expansions, now integrating traditional mudbrick construction with modern materials such as reinforced concrete.

Gidan Rumfa blends Saharan Islamic designs with local Hausa building methods and later colonial styles. It is still the Emir of Kano's residence, keeping its political and cultural importance and serving as a living heritage site (Archnet, 2020; Atlas Obscura, 2022).



Figure 3: Gidan Rumfa (Archnet, 2020)

Commercial Typologies: The Kurmi Market

Founded in the 15th century, Kurmi Market is one of West Africa's oldest trading centres. Its design features many interconnected stalls, courtyards, and arcades, supporting crafts such as dyeing, weaving, and leatherwork. The market's layout reflects Kano's history as a hub for trans-Saharan trade, especially in textiles and groundnuts. Even as new shopping centres appear, Kurmi Market remains a key cultural and economic site, demonstrating how buildings and businesses shape one another in Kano (Archnet, 2020; UNESCO, 2007).

Colonial and Post-Colonial Administrative Architecture

Following the British occupation in 1903, Kano's architectural landscape underwent a substantial transformation. New building typologies emerged, including government offices, military installations, mission schools, and designated residential quarters. These structures, predominantly constructed from fired brick with pitched roofs and expansive verandas, contrasted sharply with indigenous architectural forms and symbolised colonial authority. Colonial urban planning further entrenched social divisions by segregating European and local districts. Post-independence, these buildings were repurposed by Nigerian institutions, becoming integral components of Kano's civic environment (Archnet, 2020).



Figure 4: Kurmi Market (Nigeria Galleria, 2021)



Figure 5: Gidan Palmer (Yusuf, 2025)

Modern and Contemporary Commercial Architecture

Since the late twentieth century, many concrete-and-glass high-rise buildings have been constructed in Kano's business district. The Skyline University Tower, once known as the Bank of the North, is emblematic of this trend and stands as one of the tallest structures in northern Nigeria (Estate Intel, 2019). These new buildings symbolise economic growth and a move toward global architectural styles. However, they introduce significant challenges regarding climatic suitability and cultural integration. For instance, empirical studies comparing building performance reveal that traditional structures with thick earthen walls maintain interior temperatures averaging 6–8°C lower than peak outdoor temperatures, while modern glass towers can exhibit interior ambient temperatures up to 10°C higher than those of earthen buildings without active cooling. This difference arises because traditional forms promote passive cooling by buffering interior spaces from external temperature extremes and facilitating thermal lag, thereby reducing dependence on mechanical systems for comfort. By contrast, glass towers experience significant heat gain during the day due to their extensive glazed surfaces, resulting in high internal temperatures and requiring continuous air conditioning. Studies have shown that such reliance on HVAC systems in Kano's context can increase energy consumption by as much as 300% compared to traditional buildings (Umar, 2019), exacerbating the strain on the city's already unreliable power grid. Moreover, increased use of air conditioning contributes to higher operational expenses for occupants and greater carbon emissions. This direct comparison underscores the urgent need for contemporary building designs in Kano to adopt energy-efficient strategies rooted in local architectural practices, thereby ensuring thermal comfort, economic viability, and environmental sustainability.



Figure 6: Skyline University (LGC, 2021)

Major Trends in Contemporary Architectural Discourse

Three dominant trajectories currently define Kano's evolving architectural landscape:

- a) **The Conservation Imperative:** There is a growing academic and professional recognition of the critical necessity to conserve Kano's historic urban fabric. This has led to calls for innovative preservation methodologies that hybridise traditional material applications with contemporary structural stabilisation techniques (Yusuf, 2023).
- b) **Modernisation and Vertical Urbanism:** The proliferation of commercial and institutional high-rise typologies, particularly in the banking and university sectors, serves as a physical manifestation of economic modernisation and strategic urban branding (Estate Intel, 2019).
- c) **Erosion and Hybridisation of Vernacular Traditions:** Traditional Hausa earthen compounds are increasingly subject to erasure or significant alteration through the use of cement-stabilised blocks and hybrid construction systems. This trend reflects both economic exigencies and shifting socio-cultural aspirations regarding domestic living standards (Umar, 2019).

Although modernisation exerts the most pronounced visual influence on Kano's skyline, discourse surrounding heritage preservation is increasingly emerging as a critical counterbalance.

Materials and Methods

To evaluate the architectural identity of Kano, this study employed a qualitative, multi-method approach designed to triangulate historical data with current physical realities.

Systematic Literature Review A systematic review was conducted to synthesize existing scholarship on West African urbanism and Kano's specific architectural history. This included an analysis of key texts on Hausa traditional architecture, colonial planning documents, and recent studies on sustainable urban development in Nigeria (e.g., Umar, 2019; Yusuf, 2023).

Archival Research Historical documents and planning maps were analyzed to trace the morphological evolution of the city. This phase focused on the transition from the pre-colonial walled city (ganuwa) to the introduction of British colonial administrative zones and post-independence expansion.

Field Observations and Environmental Analysis Direct field observations were undertaken to document the current condition of architectural typologies, including the Emir's Palace, Kurmi Market, and the Central Business District. Additionally, comparative environmental performance data was collated to assess climatic suitability. This involved comparing the thermal lag and cooling efficiency of traditional earthen walls against contemporary glass-curtain facades.

Results

The analysis identifies three dominant architectural typologies in Kano. Their material characteristics, climatic performance, and socio-cultural impacts are compared in Table 1 below.

Table 1: Comparative Analysis of Architectural Typologies in Kano

Feature	Traditional Hausa Architecture	Colonial/Administrative Architecture	Modern/Contemporary Architecture
Representative Structures	Emir's Palace, City Walls (Ganuwa), Kurmi Market	Gidan Palmer, Administrative GRA zones	Skyline University Tower, Bank Complexes
Primary Materials	Sun-dried adobe bricks (tubali), rammed earth, timber, palm ribs	Fired brick, concrete, corrugated iron	Reinforced concrete, glass curtain walls, steel
Climatic Performance	High Efficiency: Passive cooling via thermal mass; interiors 6–8°C cooler than outdoors.	Moderate: Grid layouts improved airflow but introduced non-indigenous materials.	Low Efficiency: High solar heat gain; interiors up to 10°C hotter without HVAC; 300% higher energy use.
Socio-Cultural Function	Supports extended family systems (courtyards), reflects social status (zane decorations).	Segregated zoning; altered neighborhood scales and introduced administrative hierarchy.	Symbolizes global branding and modernization; risks "social alienation" by removing communal spaces.
Key Threats/Challenges	Environmental erosion (rain/flood); loss of artisanal skills for maintenance.	Urban redevelopment pressures; adaptive reuse challenges.	High operational costs; strain on power grid; cultural disconnection.

Author's Compilation, 2025

Discussion

Material Tectonics and Sustainability

Kano's buildings show a mix of traditional earthen construction and modern industrial materials. Local earthen methods are sustainable, keep buildings cool, and fit the local context, but they need regular repairs. Modern concrete and glass allow for taller, more flexible buildings, but often don't perform well in Kano's hot, dry climate. As a result, experts now suggest using hybrid building methods to address these issues (Umar, 2019).

Architects in Kano encounter significant challenges in designing for climate adaptation. Traditional Hausa architecture, characterised by courtyards and substantial earthen walls, provides passive cooling and enhances occupant well-being. In contrast, contemporary glass and concrete structures depend on energy-intensive air conditioning to achieve comfort. This context presents an opportunity to develop architectural solutions that integrate modern aesthetics with the passive cooling benefits of traditional methods. Such an approach aligns with the principles of critical regionalism, which advocates for architecture rooted in local vernaculars while addressing contemporary needs. By incorporating vernacular modernism, architects can create structures that harmonise with their environment and promote sustainable practices, thereby fostering a built environment that respects cultural identity and meets current demands.

Architects in Kano confront a distinct decision regarding climatic adaptation in design. Traditional Hausa architecture employs courtyards and substantial earthen walls to achieve passive cooling. Conversely, contemporary buildings dominated by glass and concrete require energy-intensive air conditioning to maintain comfort. The principal challenge lies in reconciling modernisation with climatic responsiveness.

Socio-Cultural Spatializations

Kano's buildings reflect social class, political power, and cultural identity. Different types of buildings show these roles: palaces represent political power, markets show economic life, and homes reflect family ties. If redevelopment ignores these patterns, it can break important social links as evidenced by Yusuf's (2023) analysis of historic structures in Kano, which found that the

demolition or alteration of culturally significant buildings directly disrupted social networks and communal practices. This highlights the need to protect both the physical buildings and the traditions they represent (Yusuf, 2023).

Critical Challenges Confronting Kano's Architectural Heritage

Kano's architectural heritage is threatened by several distinct factors, including environmental degradation, rapid urbanisation, institutional shortcomings, economic constraints, and technological unsuitability. Summarising these threats enables a more targeted policy response. Table 1 provides an at-a-glance summary, mapping each major threat to corresponding policy measures:

Table 2: Summary of Major Threats and Possible Policy Responses for Kano's Architectural Heritage

Threat	Policy Response
Environmental degradation	Proactive conservation and repair programs
Rapid urbanisation	Zoning regulations to limit overdevelopment
Institutional shortcomings	Strengthened heritage management and governance
Economic constraints	Financial incentives for conservation
Technological unsuitability	Promotion of climate-adapted building technologies

Author's Compilation, 2025

Integrating this threat assessment with targeted policy interventions is essential to safeguard Kano's architectural legacy. In summary, this alignment of threats and policy measures provides a foundation for the following analysis of each specific challenge confronting Kano's heritage.

- a) **Environmental Degradation and Climatic Stress:** Vernacular Hausa architecture is fundamentally reliant upon earthen construction methodologies. While demonstrating superior thermal efficiency, these structural systems are highly vulnerable to environmental erosion processes, particularly rainfall and flooding exacerbated by increasing climatic variability in the northern Nigerian context. For instance, the historic city walls (ganuwa) have suffered severe erosional degradation from seasonal precipitation, resulting in the fragmentation of their original monumental form (UNESCO, 2007). In the absence of consistent conservation interventions, numerous historic residential compounds and monuments face an imminent risk of structural collapse.
- b) **Rapid Urbanisation and Redevelopment Pressures:** As one of Nigeria's most densely populated urban centres, Kano experiences intense pressure on land resources due to exponential population growth. Speculative real estate dynamics and escalating housing demand drive the systematic replacement of traditional compounds with concrete masonry unit (CMU) apartment blocks and commercial complexes. This urban morphological transformation results in the fragmentation of cultural landscapes and the diminishdiminishment of symbolic spatial functions, such as those provided by extended-family courtyard typologies (Yusuf, 2023). Consequently, the demand for modern housing typologies erodes not only physical heritage artefacts but also the social systems intricately tied to these built forms.
- c) **Institutional Deficiencies and Policy Gaps:** Despite the inclusion of Kano's ancient city walls on Nigeria's UNESCO Tentative List (2007), substantive progress toward World Heritage inscription and systematic conservation remains insufficient. A critical lack of comprehensive heritage legislation exists at the state and local levels of government. One immediate legislative priority should be the implementation of a

demolition review statute. This would require thorough assessment and public discourse before demolishing any historic structures, thereby providing an automatic safeguard for heritage sites. Additionally, incentive zoning could be established to encourage developers to integrate conservation efforts into new projects by offering benefits such as density bonuses or tax incentives. Furthermore, mandated heritage institutions are frequently characterised by underfunding, staffing shortages, and political constraints. This institutional context has led to a prevalence of ad hoc, reactive conservation measures rather than a proactive, strategic framework for heritage management.

- d) **Atrophy of Artisanal Knowledge Systems:** The specialised artisanal skills requisite for the construction and maintenance of traditional mudbrick architecture, including ornamental plasterwork and symbolic motifs, are facing extinction. Younger generations demonstrate a declining interest in acquiring these traditional practices, influenced by factors such as urban migration, economic precarity, and a widespread aspirational shift toward modernist material cultures (Umar, 2019). This developing knowledge gap indicates that even if financial resources for conservation were mobilised, the essential human capital necessary for authentic restoration is at risk of permanent loss.
- e) **Economic Constraints and Funding Limitations:** Within an urban context grappling with high unemployment rates, poverty, and significant infrastructural deficits, heritage preservation is frequently deprioritised. Both private developers and residents often favour cement block construction due to its lower immediate costs, faster construction speed, and association with modernity. In this economic climate, heritage preservation is perceived as a non-essential luxury. Furthermore, local government bodies lack the necessary financial mechanisms, grant structures, or fiscal incentives to effectively encourage private-sector heritage conservation (Yusuf, 2023).
- f) **Technological Unsuitability and Energy-Intensive Typologies:** Contemporary architectural interventions in Kano, particularly those utilising extensive glazed curtain walls and reinforced concrete towers, frequently disregard the climatic realities of the Sahelian zone. In marked contrast to high-thermal-mass earthen walls that passively regulate interior temperatures, glass-and-steel structures significantly increase reliance on active air conditioning and artificial lighting systems. In an urban environment characterised by unreliable power infrastructure, this reliance creates unsustainable operational conditions (Estate Intel, 2019). The critical challenge lies not in modernisation itself, but in the uncritical importation of architectural models lacking environmental and cultural contextualization.
- g) **Socio-Cultural Alienation and Erosion of Place Identity:** Historically, architecture in Kano has functioned to encode social stratification, kinship networks, and religious values. However, the encroachment of westernised residential estates and anonymous concrete housing blocks risks the erosion of these symbolic spatial dimensions. This transformation may lead to cultural alienation among residents, weakening attachment to urban spaces that previously reinforced collective identity and a sense of belonging (Archnet, 2020).

Taken together, these challenges underscore the acute vulnerability of Kano's architectural identity amid rapid modernisation, underscoring the urgent need for strategic frameworks that reconcile heritage conservation imperatives with the demands of urban transformation.

Conclusion and Recommendations

This study has investigated the evolution of Kano's architecture, identifying key influences such as Hausa traditions, Islamic planning pre-colonial forms, colonial interventions, and recent commercial expansion. The architectural identity of Kano is currently defined by a conflict between the superior climatic performance of vernacular traditions and the aspirational symbolism of modern vertical urbanism. To resolve this, Kano must move beyond uncritical

modernisation toward a framework of Sustainable Modernization. Based on the findings, the following specific recommendations are proposed:

1. **Legislative Protection (Demolition Review Statute):** The State Government must enact a "demolition review statute." This would mandate a public impact assessment before any historic structure (specifically those older than 50 years within the old city) can be altered or razed.
2. **Incentive Zoning for Developers:** Implement fiscal policies that offer density bonuses or tax incentives to developers who integrate conservation efforts or use hybrid adobe-concrete materials rather than pure glass facades.
3. **Curriculum Integration (Artisanal Knowledge):** To combat the atrophy of artisanal skills, University architecture departments in Kano should formalize apprenticeships with local master masons, integrating traditional plasterwork (zane) techniques into modern construction curricula.
4. **Adoption of Hybrid Technologies:** Policymakers should promote the use of compressed-earth blocks (as seen in the Niamey Mud Laboratory case study) for new government housing. This bridges the gap between the durability of concrete and the thermal efficiency of earth. By implementing these targeted measures, Kano can safeguard its status as a living archive while accommodating the demands of a twenty-first-century megacity.

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