

Contextual architectural study on LAND'S END PIK 2

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Abstract. Contextual architecture is an approach that takes into account not only the physical surroundings, but also the social, cultural, and environmental aspects of a place. This design philosophy is especially relevant in rapidly growing urban areas where identity and climate sensitivity are often overlooked. The objective of this study was to identify how the design of LAND'S END PIK 2, a coastal-themed lifestyle district located on the northern coastline of Jakarta and Tangerang, applies contextual architectural principles in response to its natural and social environment. The method used in this research is qualitative with a grounded theory approach, conducted through field observation and analysis of architectural composition theories. The results show that the design responds well to its context through the use of clustered layouts, fragmented building massing, and local materials. Passive design strategies such as building orientation, large openings, and cross ventilation help improve thermal comfort. In addition, the presence of public spaces like plazas and pedestrian paths promotes social interaction and enhances inclusivity in the area. The study concludes that LAND'S END PIK 2 is a successful example of contextual architecture. Its ability to harmonize form, function, and environment highlights the value of designing with awareness of place, leading to more sustainable, livable, and culturally rooted urban developments.

1 Introduction

1.1 The urgency of contextual architecture in tropical and urban environments

Contextual architecture emphasizes the importance of architectural responses to both the physical and socio-cultural environment surrounding a site. The term “context” comes from the Latin roots *textus* (fabric), *texture* (to weave), and *con* (together), forming *contextus*, which means “to weave together” or “to unify materials.” In architecture, *context* refers to the relationship and continuity between a building and its surrounding environment [1].

In Indonesia, this approach is increasingly relevant due to major challenges such as climate change, rising sea levels, and environmental degradation. Therefore, architectural design must integrate sustainability principles—energy efficiency, use of local materials, and

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strategies adapted to tropical climates [2]. Contextual architecture is not merely aesthetic; it is adaptive and mitigating. Aini and Khatami explain that architectural context includes history, location, archaeology, ecology, regional styles, and community character [3].

Modern architecture's insensitivity—often appearing industrial, monotonous, and detached from heritage—has triggered the rise of contextualism as a corrective movement [4]. Bill Raun emphasizes that architectural form does not emerge spontaneously but evolves from existing social forms [5]. Brent Brolin also highlights that visual continuity and respect for landmarks and local styles are essential principles [6].

Thus, in tropical and urban environments such as Jakarta, contextual architecture becomes not just an ideal, but an urgent necessity to create sustainable, locally rooted, and socially relevant spaces [7].

1.2 Case study: LAND'S END PIK 2 – Integration of architecture and coastal environment

LAND'S END PIK 2 is a commercial area located in Pantai Indah Kapuk 2, North Jakarta, designed by ENP Design Consultant. The site consists of a series of restaurants and public spaces that face directly toward the sea, with access to a man-made white sand beach. Its uniqueness lies in the direct connection between indoor spaces and the coastal landscape, making it an ideal case to be analyzed through the lens of contextual architecture.

In this study, LAND'S END PIK 2 is analyzed through three key aspects of contextual architecture: natural elements, cultural elements, and infrastructure elements. From the natural aspect, the buildings are oriented northward to capture sea breezes, allowing maximum cross-ventilation and reducing the need for artificial cooling. Natural lighting is optimized through large openings, and architectural elements such as shadow play and moisture-resistant materials—such as powder-coated aluminum, tempered glass, and exposed concrete—are used to suit the humid coastal climate [8]. This design approach aligns with Ochoa and Capeluto's findings [9], who emphasize that in hot tropical climates, passive design strategies such as natural ventilation and daylight optimization can achieve greater energy efficiency than mechanical systems when integrated into early design decisions. Similarly, Stasi et al. show that cross-ventilation potential has a direct correlation with perceived thermal comfort in humid regions, underscoring the importance of building orientation and spacing as applied in Land's End PIK 2 [10].

From the cultural perspective, although built on reclaimed land, the development attempts to embrace the values of tropical Indonesian culture. This is reflected in the use of simple geometric forms, a relaxed coastal atmosphere, and the inclusion of inclusive public spaces such as plazas and pedestrian walkways that encourage social interaction. These areas represent a modern interpretation of traditional communal spaces that are open, shared, and participatory [11–13].

In terms of infrastructure, the area is equipped with an integrated drainage system, wide sidewalks, dedicated bicycle lanes, and proper waste management systems. Land use is organized through zoning, which regulates the proportion and placement of buildings to create a skyline that does not dominate the landscape. Human scale is preserved through the use of coastal-appropriate materials and color schemes. Visual quality is maintained by ensuring connection between units and by selecting façade treatments that harmonize with the environment. Architecturally, the orientation of units toward the sea is a key strategy to strengthen the visual connection with the beach. Balconies, window openings, and building orientations are carefully designed to maximize views of the ocean or canal. In some units, kitchens are placed on the east side to receive optimal lighting and to avoid blocking the main view. Open-plan layouts and semi open corridors support natural airflow and reduce reliance on mechanical systems.

The design of LAND'S END PIK 2 also considers adaptability—with flexible building functions, the potential for added facilities, and alignment with sustainability standards. All of these demonstrate that the site functions not only as a commercial space but also as a social and ecological environment that reflects contemporary tropical architecture aimed at comfort and sustainability. LAND'S END PIK 2 stands as proof that a contextual architectural approach can produce a built environment that is aesthetic, adaptive, and functional. The development not only strengthens local identity, but also presents solutions to the environmental and urbanization challenges faced by North Jakarta's coastal region.

1.3 Problem formulation

In a tropical urban context such as Pantai Indah Kapuk 2, there are significant challenges in designing commercial areas that are not only functional and aesthetically appealing, but also capable of adapting to the coastal environment—which is vulnerable to climate change, flooding, and ecosystem degradation. LAND'S END PIK 2 presents a unique and open architectural form, yet it has not been widely analyzed in depth from a contextual architectural perspective. The main issue addressed in this study is: How can the principles of contextual architecture be applied to respond to both environmental and social challenges in the design of the LAND'S END PIK 2 developments? This question is crucial because architectural design cannot be separated from the conditions of its site. A comprehensive understanding is needed of how architecture can respond sustainably to climate, local culture, topography, and infrastructure systems.

The interest in LAND'S END PIK 2 as a subject of study arises from its distinctive approach that integrates commercial function, coastal landscape beauty, and social interaction into a unified design. Given the complexity of the site conditions, this project requires deeper analysis to understand how well contextual values have been embedded into both the architectural design and the public spaces it offers.

1.4 Objectives

The objective of this research is to analyze the extent to which the principles of contextual architecture have been implemented in the LAND'S END PIK 2 developments, located in Pantai Indah Kapuk 2, North Jakarta. This study aims to examine how the design of the area responds to natural environmental contexts (such as climate, topography, and sea breeze), local cultural aspects (such as tropical atmosphere and social values), and infrastructure (including land use planning, drainage, and accessibility). Through this analysis, the study seeks to understand how the integration of architectural form, public space, local materials, and climate adaptation strategies can create a built environment that is both sustainable and rooted in strong local identity. Additionally, this research is intended to contribute to the development of contextual architectural theory, particularly within the context of tropical coastal areas and modern property development on reclaimed land [14,15].

2 Research methodology

This research uses a qualitative method with a case study approach, focusing on the LAND'S END PIK 2 area as the object of analysis. This method is chosen because it is suitable for exploring in depth the relationship between architectural design and its surrounding context—specifically in terms of nature, culture, and infrastructure. The research process begins with a literature review, aimed at identifying and formulating key concepts and important aspects of contextual architecture as the theoretical foundation. The literature review involves architectural books, scholarly journal articles, and theories from experts such as Wolford [1], Brent C. Brolin, and Billy Raun, who offer insights on the importance of visual, cultural, and ecological connections between architecture and its environment. After defining the contextual aspects, data collection is conducted through two types of sources:

1. Primary data: obtained through field surveys and direct site observation at LAND'S END PIK 2. These activities include visual documentation (photographs), spatial observation of building forms, orientation, landscape elements, and spatial circulation. The results of these observations are then translated into 3D visual reconstructions, which serve as tools for visual and spatial analysis.
2. Secondary data: gathered from literature relevant to the theory of contextual architecture, including references on tropical design, sustainability principles, and the relationship between buildings and socio-cultural context.

The collected data is then analyzed using a qualitative-descriptive approach through two main stages:

1. Aesthetic and formal analysis, focusing on form-making and visual organization based on the principles of contextual architectural composition.
2. Contextual analysis, based on three main parameters: Natural Elements, including climate, wind direction, sunlight, and vegetation. Cultural Elements, such as local symbols, social activities, and communal space arrangements. Infrastructure Elements, covering drainage, pedestrian paths, zoning, circulation, and accessibility systems.

The results of these analyses are then synthesized to draw conclusions about the extent to which the buildings and public spaces in LAND'S END PIK 2 align with the principles of contextual architecture. Thus, this methodology not only confirms the connection between design and site context, but also formulates architectural recommendations that are adaptive to the conditions of tropical coastal environments.

3 Results and discussion

3.1 Content

The buildings at Land's End PIK 2 are not situated on a single large plot, but are instead distributed across several individual sites of relatively small and varied sizes. Due to the limited size of each plot, every building unit is designed efficiently to accommodate all necessary functions, such as seating areas, service zones, small kitchens, and product display areas. The interior layouts are arranged to be compact and open, optimizing space use without feeling crowded. The total area of Land's End PIK 2 covers approximately 3.3 hectares, with the overall site plan organized to maximize spatial variety while maintaining a consistent relationship with the coastal landscape and public access.

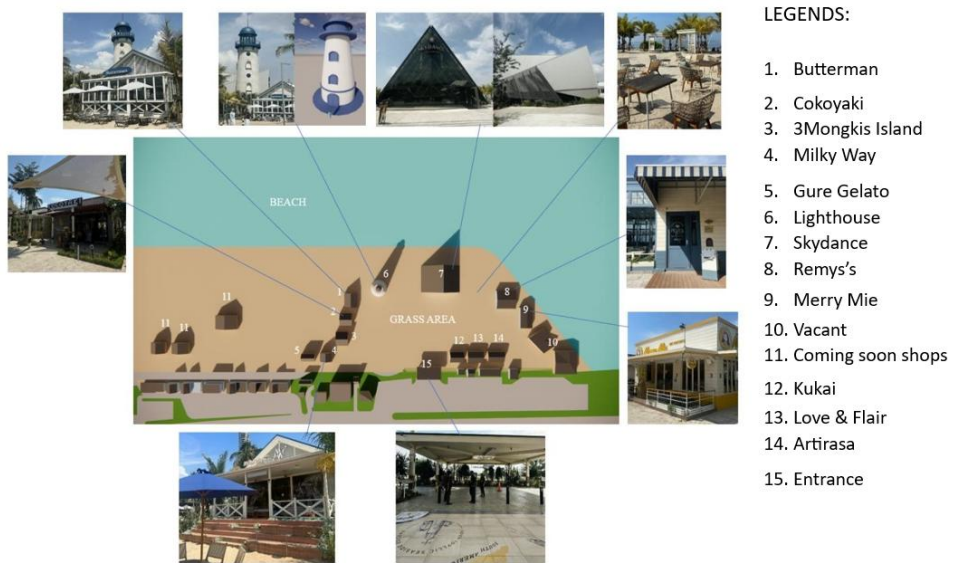


Fig. 1. Site plan of the Land's End PIK 2 commercial area.

The site plan of Land's End PIK 2 reveals that the area is designed with a spread-out open layout. The retail buildings are arranged in a linear pattern parallel to the shoreline, with relatively generous spacing between each unit. This configuration allows natural airflow to pass freely between buildings, contributing to a cooler and more comfortable outdoor environment for visitors. Each building is oriented toward public areas such as the white sand beach, green open spaces, or the main pedestrian pathway. Building openings are placed on the front side, enabling unobstructed natural light to penetrate deep into the interior spaces.

There are no rigid separations between public and private zones; instead, the design promotes fluid transitions between indoor and outdoor spaces, encouraging openness and flexibility. The plan also highlights the presence of green spaces and circulation paths surrounding the retail units, offering generous movement corridors for pedestrians and enhancing natural cross-ventilation. This spatial arrangement shows that Land's End PIK 2 is not merely planned as a commercial zone, but as an open public space that supports thermal comfort, daylighting, and integration with the coastal landscape.

The layout reflects a design intention that goes beyond retail, embracing broader contextual architectural principles. Similar to what Alhamdani [4] and Aini & Khatami [3] describe, the approach taken here illustrates how form and function are derived from both *place-specific environmental logic* and *cultural identity*. The adaptive spatial configuration also aligns with Sumalyo's study on colonial tropical architecture, emphasizing openness and orientation toward natural airflow as a sustainable design strategy in humid climates [2]. From this site plan, further analysis is conducted based on the principles of aesthetic form composition and contextual architectural analysis, assessing how the design relates to its physical, environmental, and social surroundings.

3.2 Analysis of building composition principles

Several key architectural composition principles are applied to the planning of Land's End PIK 2, creating a cohesive and responsive design. These principles include:

3.2.1 Axis

The layout of buildings at Land's End PIK 2 is dominated by a main axis that connects the parking area to the iconic Skydance Pyramid, located near the shoreline. This axis not only serves as the primary circulation route for visitors but also establishes a strong visual direction from inland to the sea. The placement of landmarks at the end of this axis—such as the glass pyramid and lighthouse—enhances the narrative of space as a symbolic journey from the bustle of the city to tranquility by the ocean.

This axial planning is consistent with what Sukada and Salura [7] observed in cultural centers in Semarang, where axial orientation is used as a *spatial storytelling tool* to guide visitors through contrasting atmospheres. Similarly, Indraswara et al. highlight the significance of axial composition in linking working and social zones within batik enterprises, reinforcing the concept of spatial hierarchy and cultural symbolism [9].

3.2.2 Balance

The area applies the principle of asymmetrical balance in the arrangement of its massing. The western side of the site features larger open spaces, more active public zones, and several informal seating areas. In contrast, the eastern side feels more enclosed and private, with tighter building layouts and smaller structures. These two contrasting spatial characters are balanced by the presence of two major visual anchors—Skydance and the Lighthouse—which serve both as focal points and as natural separators between the two sides of the site.

This asymmetrical yet harmonious composition resonates with Brodin's view [6], that visual continuity should be maintained through proportion and rhythm rather than rigid symmetry. The balance achieved in Land's End PIK 2 thus exemplifies a contextual adaptation of classical composition principles to a tropical, informal setting.

3.2.3 Unity

Spatial unity across Land's End PIK 2 is achieved through the use of consistent design elements. The pedestrian walkways, green landscape areas, and flowing beachfront collectively connect all building zones into a continuous, cohesive experience. Additionally, the uniformity in building form and scale helps establish a harmonious spatial rhythm, making the entire development feel like a single, integrated destination. Strategically placed landmarks further enhance visual continuity across the site.

This approach parallels Ekomadjo's analysis of traditional markets in Nusantara, where spatial unity is strengthened by recurring architectural language and human-scale spaces that support social interaction [10]. The combination of consistent materials and rhythm in Land's End PIK 2 extends this vernacular sensibility into a contemporary coastal context.

3.2.4 Rhythm

The rhythm of building placement in the area varies by zone. On the west side, the rhythm is more open and fragmented, creating a relaxed atmosphere with visual pauses between public spaces. Meanwhile, on the east side, the rhythm is denser and more organized, drawing the visitor's focus toward key visual elements like the Lighthouse and Skydance Pyramid. The alignment of buildings along the shoreline also contributes to a steady horizontal rhythm, which supports clear movement patterns and orientation throughout the site.

This use of rhythmic massing echoes the strategies described by Vera D. Damayanti [14], who emphasizes how controlled repetition and spacing in coastal urban design generate visual balance without uniformity. The rhythm in Land's End PIK 2 thus reinforces a sense

of directionality toward the sea—an essential feature of contextual adaptation in waterfront development.

3.2.5 Accents and color

Visual accents at Land’s End PIK 2 are expressed through bold architectural forms, such as the glass pyramid (Skydance) and the Lighthouse, which act as orientation markers and primary visual highlights within the composition. These elements function as focal points that provide identity without overwhelming the overall landscape. The use of natural coastal colors—white, beige, ocean blue, and tropical green—reinforces the beachfront theme, creating a bright, relaxed, and landscape-integrated atmosphere. The combination of accents and color schemes gives the site a strong identity while maintaining visual harmony with its coastal setting.

This aligns with Ardiyanto’s [5] findings that tropical buildings often achieve visual harmony through color palettes derived from natural surroundings, thereby reducing contrast between the built form and the landscape. Likewise, Soemardjan [13] emphasizes that integrating visual markers into social gathering points strengthens communal identity within public environments.

The analysis of architectural composition principles at Land’s End PIK 2 reveals that the development does not aim to contrast sharply with its environment, but rather to blend aesthetically with its coastal context. The buildings are arranged with a varied yet directional rhythm, resulting in an open, dynamic space that is welcoming to visitors. Visual accents like Skydance and the Lighthouse provide strong identity markers without becoming overpowering.

From an aesthetic perspective, the use of these principles demonstrates an architectural intent that seeks to be visually appealing while maintaining harmony with the surrounding natural landscape—achieved through tropical color palettes, wide openings, and natural ventilation strategies. This finding is consistent with prior studies by Sumalyo [2] and Sukada & Salura [7], who argue that tropical contextualism succeeds when it balances environmental adaptation with cultural expressiveness.

Therefore, the contextual architecture of Land’s End PIK 2 stands out not because it is radically different, but because it maximizes the coastal site’s potential to create a comfortable, open, and integrated spatial experience—confirming the argument that contextual approaches can harmonize modern development with the spirit of place [1].

The contextual architectural analysis of this commercial area is viewed through three key elements: Natural Elements, Cultural Elements, and Existing Infrastructure present on the site. These elements serve as the foundation for understanding how the design responds to its environmental, cultural, and functional context (table 1).

Table 1. Contextual architecture analysis.

Contextual Architecture	Key Contextual Components	Contextual Architectural Response
Natural Elements	Sunlight	The building orientation is designed to be open, with large openings and wide overhangs to respond effectively to direct sunlight and tropical climate conditions.
	Air	Cross ventilation is optimized through generous openings and a layout of staggered building masses, allowing natural airflow to pass through the spaces efficiently.
	View	The direct ocean view is utilized to create an open visual experience that blends seamlessly with the coastal landscape.
Cultural Elements	Social space and landmark	The area is designed with clustered open spaces to encourage public interaction, with landmarks such as a lighthouse that holds symbolic meaning in Indonesia's maritime history.
Infrastructure	Utility	Electrical infrastructure and other utilities are neatly embedded within the landscape, ensuring aesthetic integrity of the area is not disrupted.
	Transportation	Road access and pedestrian circulation are integrated smoothly with the site, providing strong connectivity without damaging the natural landscape.
	Land Use	The site functions are dominated by open public spaces and recreational buildings, aligned with the character of a beachside environment.
	Building Visuals	The appearance of the buildings contrasts with the surroundings, primarily using dark tones (black), yet still remains conceptually unified with the coastal context through the use of natural forms and materials.

3.3 Additional notes

3.3.1 Recommendations

For the future development of coastal areas, the contextual architectural approach should be expanded by incorporating local cultural aspects more deeply, such as vernacular architectural forms and traditional communal spatial patterns. Additionally, further studies could focus on analyzing the thermal performance and energy efficiency of the buildings in order to strengthen the sustainability aspect. It is also recommended to use more site-specific environmental data, such as microclimate simulations, to ensure that designs become increasingly responsive and precise in addressing the dynamic conditions of coastal sites.

4 Conclusion

LAND'S END PIK 2 demonstrates a strong application of contextual architecture through its adaptive design responses to the natural, cultural, and infrastructural conditions of the tropical coastal environment. This study finds that the most dominant contextual approach implemented in the area is related to natural elements, where buildings are intentionally oriented toward the sea to optimize views, natural lighting, and cross ventilation.

The strategic placement of seating areas along the beachfront is a common feature in nearly all units, reinforcing the experience of open and immersive spatial quality within the coastal landscape. Furthermore, the simple building forms, use of moisture-resistant materials such as tempered glass and powder-coated aluminium, and the selection of large openings serve as concrete design responses to the humid tropical climate.

The integration of infrastructural elements, such as micro-drainage systems and pedestrian pathways, also enhances the site's suitability and functionality in relation to its environmental context. This adaptive approach reflects the designers' awareness of both ecological challenges and the functional demands of public space in an urban tropical setting.

In conclusion, the contextual architectural principles applied at LAND'S END PIK 2 not only create aesthetic harmony with the natural surroundings, but also address social and environmental needs comprehensively. This makes the development a successful example of contextual architecture in a commercial district, as it not only strengthens local identity, but also offers practical solutions to issues of sustainability, comfort, and public space appeal in a coastal urban environment.

However, this study also has several limitations. The analysis primarily focuses on spatial and design aspects based on visual observation and secondary documentation; therefore, it does not include in-depth quantitative evaluation of environmental performance—such as energy consumption, thermal comfort measurement, or material lifecycle analysis. In addition, user perception and behavioral responses toward spatial quality were not explored in detail, which could provide valuable insights into how contextual architecture affects every day experiences in coastal environments.

For future research, it is recommended to conduct interdisciplinary studies combining **architectural design, environmental simulation, and social behavior analysis** to further validate and expand the understanding of contextual design performance. Comparative studies with other coastal developments across Indonesia—such as those in Bali, Makassar, or Belitung—could also highlight regional variations and enrich the discourse on contextual tropical architecture in contemporary urban settings.

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