

Research Article

Development Strategies to Enhance Place Attachment in the Urban Park Areas of Banda Aceh (Case Study: Bustanussalatin, Putroe Phang, Sari Gunongan)

Ulya Ananda Permatasari¹, Mirza Irwansyah^{2*}, Evalina Zuraidi²

¹Department of Architecture, Faculty of Engineering, Universitas Syiah Kuala, Banda Aceh 23111, Indonesia

²Department of Architecture and Planning, Faculty of Engineering, Universitas Syiah Kuala, Banda Aceh 23111, Indonesia

*Corresponding author: Mirza Irwansyah (mirza.hasan@usk.ac.id)

Abstract

Urban parks play a strategic role in fostering social interaction, cultural continuity, and environmental quality, all of which contribute to place attachment. In Banda Aceh, several historically significant urban parks, such as Bustanussalatin Park, Putroe Phang Park, and Sari Gunongan Park, have experienced declining utilization despite their cultural value and central location. This study aims to formulate strategic development directions for enhancing place attachment through a SWOT-based analysis. A qualitative, strategy-oriented research approach was adopted. Primary data were obtained through in-depth interviews with park visitors, government institutions, academic experts, and park management staff, derived from the results of a dominant factor analysis of the research questionnaire. Interview data were analyzed using Interpretative Phenomenological Analysis (IPA) to identify key internal and external factors influencing place attachment, which were subsequently synthesized into a SWOT (Strength-Weakness-Opportunity-Threat) framework using IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrices. The results indicate that strong social activities, historical identity, and strategic location constitute key internal strengths, while inadequate facilities, limited climate-adaptive design, and fragmented management remain major weaknesses. Externally, opportunities arise from government support, Corporate Social Responsibility (CSR) collaboration, digital innovation, and community engagement, whereas threats include vegetation degradation, vandalism, and bureaucratic constraints. The study concludes that SWOT analysis provides a systematic basis for formulating integrated and context-sensitive development strategies that strengthen place attachment by aligning social, historical, ecological, and managerial dimensions in Banda Aceh's urban parks.

Keywords: SWOT Analysis; Strategic Development; Place Attachment; Urban Parks; Public Space Management; Community Engagement; Banda Aceh

Introduction

Social interaction in modern public spaces is no longer just about physical presence, but rather a manifestation of collective involvement that shapes community identity. This shift highlights

Article History

Received: 31 Dec, 2025; Revised: 10 Feb, 2026;

Accepted: 20 Feb, 2026; Published: 23 Feb, 2026



the importance of integrating both physical and digital dimensions in the design of public spaces to foster a sense of belonging and community cohesion [1]. City parks as a vital element of green infrastructure have a strategic role in improving the quality of life, stress recovery, and social integration. Enhancing the accessibility and quality of these parks can significantly contribute to cultural identity development and social interactions among diverse community members [2]. Furthermore, the design of urban parks should prioritize features that encourage diverse social interactions, ensuring that all community members feel included and engaged in their shared spaces.

The rapid transformation of urban landscapes today places parks not merely as aesthetic elements, but as vital infrastructure that supports psychological well-being [3]. The quality of spatial design and the availability of inclusive facilities are the main determinants in extending the duration of visits and the frequency of social interactions in public spaces [4]. Moreover, the integration of sensory elements and accessible pathways in park design significantly enhances user experience, particularly for vulnerable populations. Research indicates that well-designed parks, which include features like shaded seating and multi-sensory stimulation, foster not only physical presence but also social inclusion and community interaction among diverse groups [5]. This approach not only addresses the immediate needs of users but also cultivates a sense of belonging and safety, which are essential for encouraging longer visits and more frequent interactions. As urban planners increasingly recognize the importance of these factors, the potential for parks to serve as dynamic social hubs becomes evident, ultimately contributing to the overall psychological well-being of urban residents.

This phenomenon is closely related to place attachment, an emotional and functional bond that provides a sense of belonging and continuity for individuals. This interconnectedness highlights the importance of preserving these bonds, as they can enhance community well-being and promote a shared sense of purpose, ultimately contributing to the sustainability of cultural practices and social structures within the community [6]. Thus, the implications of place attachment resonate at both personal and communal levels, reinforcing the notion that our environments play a crucial role in shaping who we are and how we relate to one another [7].

In Banda Aceh, previous studies have identified underutilized and fragmented park conditions, examined collective memory and place identity in key parks [8,9], and noted conservation efforts aligned with the city's spatial planning framework [10]. However, comprehensive research that simultaneously identifies the dominant factors shaping place attachment across multiple urban parks using a factor analysis approach remains limited. Based on an analysis of the factors forming place attachment within urban park areas in Banda Aceh, this study further examines the efforts that can be undertaken to maintain visitors' interest in park visitation and to enhance the place attachment already possessed by park users.

To strengthen place attachment in Banda Aceh's urban parks, development strategies should prioritize improving spatial quality, reinforcing cultural meaning, and expanding opportunities for social interaction. These objectives can be achieved through revitalizing park facilities to support diverse and inclusive activities, integrating local history and cultural narratives to reinforce place identity, and providing flexible spaces that encourage community participation. In the context of managing modern urban parks with historical value, individual understanding and knowledge can strengthen a sense of belonging to the local community by enabling the sharing of knowledge and fostering connectedness [11]. These potential values can be categorized as strengths or opportunities to be developed within the strategic planning of historical urban parks, such as Bustanussalatin Park, Putroe Phang Park, and Sari Gunongan Park.

Furthermore, improving accessibility, safety, and environmental comfort can encourage repeated use and longer visit durations, thereby reinforcing emotional bonds between users and the park environment. Visitors, as active users of parks, can be positioned as the main focus of

analysis by examining behavioral patterns, the affective experiences gained during visits, and the meanings derived when choosing a particular park. Community involvement in planning, programming, and maintenance is also essential to ensure that parks reflect local needs and values, ultimately strengthening a sense of ownership, togetherness, and long-term attachment to Banda Aceh’s urban parks. Beyond visitors, other stakeholders such as government authorities and academics play a crucial role in implementing development strategies, operating from both governance and scientific perspectives. Through the integration of these three actors, innovative development strategies for Banda Aceh’s urban park areas can be formulated.

Therefore, based on the factors inherent in Banda Aceh’s urban parks, these strategies can be developed by aligning potential historical values, visitor interactions and experiences, collaborative relationships among multiple stakeholders, and by enhancing opportunities through improved systems that focus on providing meaningful spaces for visitors.

Materials and Methods

The methodological structure of this research uses a sequential method approach that prioritizes quantitative research results followed by qualitative. The qualitative approach continues the findings of the analysis of the most dominant factors obtained from questionnaire data as well as other contextual meanings related to place attachment. Based on the research design, qualitative methods are used to interpret the dominant factor analysis results in conjunction with interview findings and to translate them into development strategies. This approach enables a comprehensive understanding of visitors’ experiences, social and cultural values, and management perspectives, ensuring that the proposed strategies are empirically grounded, context-sensitive, and responsive to the current conditions of urban parks in Banda Aceh.

Study Locations

The research was conducted in the urban parks of central Banda Aceh, specifically focusing on Bustanussalatin, Putroe Phang, and Sari Gunongan Parks. Historically, these three parks were contiguous parts of the Ghairah Park called the royal garden complex from the Aceh Darussalam Sultanate, but modern urban development has since fragmented them into separate spaces. They occupy a strategic location at the heart of Banda Aceh and remain adjacent to key heritage landmarks (e.g. the Great Mosque of Baiturrahman and the sultan’s palace). The sites were selected because of this central location and historical significance, combined with the contemporary phenomenon that they are now relatively underused, quiet public spaces seldom visited by locals. In summary, the parks’ shared origin as former royal palace gardens and their current spatial separation by the city’s structure make them an ideal context for studying place attachment in Banda Aceh.

Table 1. Research variable

Aspect of Study	Research Variables	Indicators
Development strategies for the urban park areas of Banda Aceh	Physical Attributes	Historical Value Natural Elements Other Physical Qualities, such as facilities, cleanliness, accessibility
	Social Values	Individuals Community

Research Variables

The study defines development strategies of place attachment using multiple dimensions, each operationalized by specific indicators and sub-indicators as in **Table 1**.

Research Approach

The development strategies for enhancing place attachment in this study are formulated through a qualitative, strategy-oriented research approach. Although the identification of key place attachment factors was conducted at an initial stage to determine the most dominant factors and is not discussed further in this paper, the formulation of development strategies is entirely based on more in-depth qualitative methods, particularly through interviews with park visitors, government stakeholders, and academic experts in relevant fields. This approach allows the research to capture contextual understandings related to social meanings, historical values, environmental quality, governance, as well as interaction values and individual and community experiences, all of which are essential aspects of strategic development.

To systematically translate qualitative findings into implementable strategies, this study applies a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. Internal factors (strengths and weaknesses) and external factors (opportunities and threats) are identified and weighted based on interview results. These factors are then organized into IFAS and EFAS matrices, enabling the formulation of strategic alternatives (aggressive, diversification, turnaround, and defensive strategies). Through this approach, the development strategies for place attachment are not only grounded in empirical input from stakeholders but are also structured within a strategic planning framework that ensures relevance, feasibility, and alignment with the urban context of Banda Aceh.

Sampling Methods

This study employs a non-probability sampling approach tailored to the research objectives and the characteristics of the required data, encompassing both quantitative and qualitative data collection stages (**Table 2**).

In the initial stage, questionnaire data were collected using purposive sampling. Respondents were selected based on specific criteria, namely visitors who had previously visited or were currently using urban park areas in Banda Aceh. A total of 159 respondents participated in the study, consisting of 70 respondents from Bustanussalatin Park, 70 respondents from Putroe Phang Park, and 19 respondents from Sari Gunongan Park. For Sari Gunongan Park, the population size was fewer than 100; therefore, the entire population was included as the sample, totaling 19 respondents. Sari Gunongan Park was retained in the analysis because it forms part of the Putroe Phang Park area, shares similar unique historical structures, and provides better historical information facilities compared to the other parks.

This technique was applied to ensure that respondents had direct experience with urban park use and were therefore able to provide relevant assessments related to place attachment. Respondents were selected based on their willingness to complete the questionnaire. The questionnaire served as an exploratory preliminary step to identify dominant factors shaping place attachment; however, it does not constitute the main focus of the analytical discussion in this paper.

Subsequently, during the qualitative data collection stage, the study applied purposive sampling through an in-depth interview approach. Informants were deliberately selected based on their level of involvement, knowledge, and experience with urban park conditions. The primary informants consisted of park visitors who were present at each study location, had multiple visitation experiences, and were able to provide in-depth insights into perceived visit

quality. Government representatives were selected from the agency responsible for park management, namely the Environmental, Sanitation, and Urban Beautification Agency of Banda Aceh (DLHK3), along with academics relevant to the field of urban studies who possess expertise in place attachment and urban parks.

The in-depth interview technique was also used to reach additional informants recommended by initial participants who were considered to have a deep understanding of the issues under study. This approach was primarily applied to government representatives and academic experts, while interview data from park visitors were treated as the main analytical focus of the study.

This sampling approach enables the study to obtain rich and contextual data, supporting an in-depth analysis of interactions, experiences, and perceptions of both visitors and stakeholders. Accordingly, the sampling method is aligned with the research objective of comprehensively understanding the factors shaping place attachment and formulating development strategies for urban parks in Banda Aceh. The following section provides an overview of the interview informants participating in this research.

Table 2. Overview of research informant profiles.

Code	Gender	Status/Role	Location/Institution
TB01	Female	Visitor	Bustanussalatin Park
TP01	Female	Visitor	Putroe Phang Park
TS01	Female	Visitor	Sari Gunongan Park
DO1	Male	Operational Service Officer	Environmental Control and Management Division, Environmental, Sanitation, and Urban Beautification Agency of Banda Aceh (DLHK3)
AO1	Male	Academic	Syiah Kuala University

Analytical Methods

Primary data were obtained through in-depth interviews with park visitors, government representatives, academics relevant to the field of study, and supporting stakeholders who are familiar with park conditions, such as park management officers. These data were used to support the identification of interaction and visitor experience factors that shape place attachment in the urban park areas of Banda Aceh, based on the results of the previous factor analysis. The analysis focuses on an in-depth interpretation of interactions and experiences, as well as participants' perceptions and evaluations of physical, social, historical, and cultural aspects, along with natural elements and park management, particularly in relation to cleanliness, safety, and accessibility.

Each interview was analyzed using the Interpretative Phenomenological Analysis (IPA) method to gain a deep understanding of the subjective experiences and meanings constructed by each informant. Through this approach, the interview data were categorized into emerging key themes. This thematic categorization process forms the basis for identifying internal and external factors that influence place attachment.

This study employs Interpretative Phenomenological Analysis (IPA) to explore the lived experiences and perceptions of diverse stakeholders regarding place attachment in Banda Aceh's urban parks. While IPA is traditionally applied to small, homogenous samples, its application in this research is justified by the need to capture divergent perspectives on a shared phenomenon.

The heterogeneous group, comprising visitors, government officials, and academics, was purposively selected to provide a holistic multi-perspective IPA, where each group represents a unique 'lifeworld' interacting with the same public space.

To ensure analytical rigor, the study followed a structured four-stage process: (1) immersive reading and reflective noting of individual transcripts; (2) development of emergent themes within each stakeholder group; (3) searching for connections across themes to identify 'master themes'; and (4) a dual-layer interpretation (double hermeneutic), where the researcher made sense of the participants making sense of their environment.

Results

Questionnaire data were used as an initial step to identify the most dominant factors shaping place attachment in the urban park areas of Banda Aceh (**Table 3**). From the questionnaire results, the KMO output value of 0.85 indicates that the questionnaire results have met the criteria and can be continued for factor analysis. Determining the most dominant factor uses the exploratory factor analysis stage with a varimax rotation approach. The results of this varimax rotation are in the form of maximum likelihood grouping based on the results of respondents' answers and form a new factor based on the latent items that influence it.

Table 3. Post-Analysis Factors.

Factor Label	Description	SS Loadings	Proportion Explained
Quality and Area Interaction	Combination of Affective and Social Dimensions	7.87	0.32
Governance and Public Facilities	Integration of Management and Historical Value	3.99	0.16
Place Memory	Consistent with the Initial Factor	3.36	0.14
Participation and Collective Knowledge	Broadened Interpretation toward Social Engagement and Place Value Understanding	3.07	0.13
Nature and Environmental Attachment	Consistent with the Initial Factor	2.45	0.10
Negative Emotional Perception and Sense of Loss	Consistent with the Initial Factor	2.34	0.10
Secondary Infrastructure	Additional Minor Factor	1.28	0.05

The results of the questionnaire analysis indicate that social interaction and community activities are the most dominant factors. Social interaction emerged as the primary driver of place attachment, evidenced by the highest SS loading of 7.87. Respondents consistently prioritized Quality and Area Interaction over historical education, as reflected in the lower loading for Participation and Collective Knowledge (3.07). Visitors' responses show the highest scores on social quality and interaction aspects, where urban parks are primarily utilized as spaces for family and community gatherings. This factor serves as the primary driver, explaining 32% of the total variance. It underscores that affective experiences and social interactions are the most significant elements anchoring visitors to these public spaces.

Although several other factors also emerged from the post-factor analysis, the analysis in this paper focuses on the most dominant factor as an effort to maintain and strengthen the quality of visitor interaction and experience. Other post-analysis factors also represent elements shaping place attachment in Banda Aceh's urban parks after refinement from pre-analysis items

and may serve as important considerations for improving the overall quality of urban park areas in Banda Aceh.

Historical elements alone do not directly generate attachment unless they are integrated into visitors' social experiences. Visitors explained that their motivation to visit the parks is not driven by an interest in learning about historical values. Moreover, some respondents stated that they were unaware that Banda Aceh's urban park areas have historical origins dating back to the royal era. One visitor expressed this as follows:

"I once read about the history, but I am not sure whether this park is really what was meant. So, I come here simply to seek calmness, not to learn about its history." (TB01)

Current visits are therefore largely driven by present day needs for social interaction spaces, while some visitors also choose the parks as places to recall memories of their childhood.

Interview results with visitors further emphasize that past memories, the availability of adequate facilities, and physical comfort, such as the presence of shade trees and overall cleanliness, are critical factors in building attachment. Natural elements, in particular, play an important role in shaping place attachment. Many visitors choose their destination in search of tranquility, a cool atmosphere under trees, and protection from thermal discomfort caused by direct sunlight. On the other hand, visitors also commented on cleanliness management and vegetation arrangement, as reflected in the following statement:

"In the past, Putroe Phang Park was not scary, but now I don't want to go there anymore because I feel afraid, so I prefer to move to Bustanussalatin Park instead." (TB01)

In addition, many long-term visitors expressed disappointment with physical changes resulting from park revitalization that removed meaningful childhood elements, and they emphasized the need for improved facilities such as toilets, prayer spaces, and landscape maintenance. One visitor stated:

"I find it difficult to locate a prayer room and toilets in this park. I don't even know whether they exist or not." (TP01)

Based on these findings, it can be identified that visitors tend to prefer places that provide a quality of interaction aligned with their current needs and a quality of experience that resonates with their past expectations and memories. Although other pre-analysis factors are not dominant determinants in enhancing visitation quality, visitors often associate the quality of their interactions and experiences with the fulfillment of basic needs, particularly in terms of facility quality, peace of mind, and environmental comfort.

Table 4. Visitor interview data analysis.

Category	Findings
Social activities	Opportunities for organizing events
Facility provision	Playground facilities are favored by visitors
Natural shading	Dense vegetation influences visitor comfort
Historical awareness	Lack of interest in historical aspects
Memories and nostalgia	Physical changes differ from past memories
Design Policy	Spatial arrangement is not suited to the climate
Cleanliness	Expectation for improved park cleanliness
Safety and facility provision	Need for security facilities and adequate lighting
Physical facility provision	Insufficient availability of public facilities in the park

SWOT Analysis

The categorization of SWOT factors based on visitor interviews was conducted through several stages: verbatim transcription of the interviews, a coding process to break down meaning units in order to obtain categories or themes, and the assignment of these factors to the corresponding SWOT elements (**Table 4**).

Based on the visitor interviews, the most important aspects in enhancing place attachment are memory, facility provision, and physical comfort. As long-established parks, many visitors expressed disappointment over physical changes that have eliminated elements associated with their childhood memories. Inadequate and poorly maintained facilities negatively affect visitor comfort, particularly in relation to toilets and prayer facilities. Physical comfort is also influenced by ecological spatial arrangement, park cleanliness, and the lack of specific maintenance in damaged areas. Visitors' expectations for better design and maintenance are therefore crucial in supporting increased visitation and strengthening place attachment.

As the main actors who activate urban parks, visitors require support from institutional stakeholders. These stakeholders expressed strong support for collaborative governance and digital innovations, such as Wi-Fi and smart city facilities, to modernize the parks. Openness and responsiveness to technology can serve as a new initiation for Banda Aceh's urban parks to increase visitor interest, especially among younger generations who are accustomed to digital environments. In line with everyday life, technological and informational innovations are considered suitable programs for introducing park history to the public. However, alongside the existing potential and strengths of Banda Aceh's urban parks, this study also highlights emerging challenges. Several categories and themes have become the main focus for development strategies. **Table 5** are the thematic categories that emerged from the interviews with government institutions.

Collaboration, maintenance, and digitalization have emerged as the main current priorities. Collaboration has become an integral part of the government's planning agenda and is already evident in several aspects of Banda Aceh's urban development. Park maintenance is currently a key focus, as it constitutes an important component of the annual work plans of the agencies responsible for park management. Digitalization has also begun to be implemented as a strategy to anticipate potential threats and constraints affecting the parks.

However, during the implementation of these programs, challenges related to non-integrated inter-agency coordination and limited budgets often restrict the flexibility and effectiveness of idea execution. Therefore, CSR initiatives are viewed as both a hope and a practical solution for formulating and supporting development strategies for Banda Aceh's urban park areas.

To complement the perspectives of visitors and government institutions, this study also incorporates insights from academic experts. The following section presents the results of interviews with academics, which provide a theoretical and research-based perspective on place attachment and urban park development. These insights are essential for critically evaluating existing conditions, validating empirical findings, and formulating development strategies that are conceptually sound, context-sensitive, and aligned with broader discourses on urban public space and place attachment.

1. Positioning research as the primary foundation for decision-making in park development actions, particularly in aspects that prioritize community interests.
2. Recognizing the community as the central subject through the provision of interactive public spaces for park users, as reflected in this study involving visitors to Bustanussalatin Park, Putroe Phang Park, and Sari Gunongan Park.

3. Assigning clear roles to each stakeholder, government, academics, local communities, and the private sector, in supporting the functions of urban parks and strengthening place attachment within these areas.
4. Designing and recommending improvements to social, ecological, and aesthetic quality based on local identity, culture, and other indigenous values of Banda Aceh.
5. Developing public spaces as interconnected urban spaces that function as an integrated network, supported by improved facilities, cleanliness, vegetation, signage, shaded pedestrian paths, and the use of Acehnese endemic park elements.

Table 5. Government institutions interview data analysis.

Category	Findings
Collaboration	Mayoral policy support for collaboration Involvement of the private sector in park development Potential collaboration through CSR programs Opportunities to open joint revitalization projects with external parties
Work Programs	Commitment to accelerating the mayor's programs, particularly the 100-day priority programs
Potential	Historical value as an intrinsic attraction Strategic location in the city center as a main focus of park development Opportunities to apply concepts based on awards for child-friendly parks and previously achieved positive image
Social and Community Activities	Direction of park development as a community public space Expansion of community participation through events organized by private sectors and government agencies
Innovation and Evaluation	Regular evaluation processes Openness to research and innovation Community support through citizen feedback forums
Non-integrated Management	Authority and coordination challenges across sectors Existence of heritage conservation regulations limiting physical interventions Support from regulations and formal planning frameworks Cross-agency synergy in preserving historical values
Re-provision of Inadequate Facilities	Provision of facilities Positive public response to improvements in park facilities
Historical Branding Not Well Communicated	Modernization and digitalization efforts Digitalization aligned with smart city trends Transformation of parks toward digital integration
Budget Constraints and Limited Execution Capacity	Obstacles and disruptions Cable theft and vandalism increasing maintenance costs Decline in green cover and vegetation Damage to parks inherited from previous administrations
Green Technology	Green technology has not been fully implemented Potential for the application of green technology

Implementation of SWOT Analysis in the Development Strategy for Place Attachment

The implementation of the SWOT analysis serves as a strategic framework to translate the empirical findings on place attachment into actionable development strategies for urban parks in Banda Aceh. By synthesizing the perspectives of visitors, government institutions, and academic experts, this analysis identifies internal strengths and weaknesses, as well as external opportunities and threats, that influence the sustainability and enhancement of place attachment within urban park areas (**Table 6**).

Table 6. Strengths Data Analysis.

Strengths (S)	Findings	Sources
Dominance of social interaction and community activities	Urban parks function strongly as spaces for family and community gatherings, making social interaction the primary factor shaping place attachment.	Questionnaire and observation
Presence of long-term visitor memories and nostalgia	Childhood memories and past experiences strengthen emotional bonds between visitors and the parks.	Visitor interviews
Natural elements as the main attraction	Dense vegetation, shading, and a cool atmosphere significantly contribute to visitor comfort and attraction.	Visitor interviews and observation
Intrinsic historical value of urban parks	Parks such as Bustanussalatin Park, Putroe Phang Park, and Sari Gunongan Park possess royal-era historical values that have the potential to strengthen place identity.	Government institution interviews
Government policy support for collaboration	The existence of mayoral policy support, formal regulations, and openness to research and evaluation processes.	Government institution interviews
Government commitment to routine maintenance and evaluation	Park maintenance is incorporated into the annual agendas of the relevant government agencies.	Government institution interviews

Strengths of Banda Aceh’s urban parks are primarily reflected in their strong social function. The findings indicate that social interaction and community-based activities are the most dominant factors shaping place attachment, positioning parks as essential public spaces for family gatherings and communal engagement. In addition, long-term visitors exhibit emotional bonds rooted in childhood memories and nostalgia, reinforcing attachment through lived experiences. Natural elements, such as dense vegetation and shaded areas, further strengthen attachment by providing physical comfort and a tranquil environment. These qualities are supported by the intrinsic historical value of several parks, including Bustanussalatin Park, Putroe Phang Park, and Sari Gunongan Park, as well as by policy support and openness from government institutions toward collaboration, evaluation, and research-based planning.

Several weaknesses constrain the optimization of place attachment (**Table 7**). The most prominent limitation is the low level of visitor awareness and interest in historical values, as heritage elements are not effectively integrated into everyday park experiences. Inadequate and poorly maintained facilities, particularly toilets, prayer spaces, lighting, and safety infrastructure, reduce visitor comfort and satisfaction. Issues related to cleanliness, vegetation management, and perceptions of insecurity further weaken attachment. Moreover, revitalization efforts that removed elements associated with collective memory have led to a sense of loss among long-term users. From an institutional perspective, fragmented management and limited inter-agency coordination also hinder cohesive and effective park development.

The analysis reveals significant opportunities for strengthening place attachment (**Table 8**). Collaborative governance involving government bodies, academics, local communities, and the private sector, especially through CSR initiatives, offers a practical pathway for overcoming financial and managerial constraints. The integration of digital innovation and smart city concepts, such as wi-fi, digital information systems, and interactive media, presents an opportunity to attract younger generations and to communicate historical narratives in more engaging ways. Furthermore, the strategic location of parks within the city center supports their development as interconnected public spaces forming an integrated urban park network. Opportunities also exist to apply child-friendly park concepts, green technology, and culturally grounded design approaches that reinforce local identity and sustainability.

Table 7. Weaknesses Data Analysis.

Weaknesses (W)	Findings	Sources
Low visitor awareness and interest in historical values	Historical elements are not integrated into visitors' social and everyday park experiences.	Visitor interviews
Inadequate and poorly maintained public facilities	Limited availability of toilets, prayer facilities, lighting, and other supporting amenities.	Observation and visitor interviews
Issues related to cleanliness and environmental comfort	Cleanliness management and vegetation arrangement remain suboptimal.	Observation and visitor interviews
Declining sense of safety in certain parks	Insufficient lighting and security facilities create perceptions of insecurity.	Visitor interviews
Physical changes that remove meaningful park elements	Revitalization efforts that are not sensitive to collective memory reduce emotional attachment.	Visitor interviews
Fragmented inter-agency management	Overlapping authorities and weak coordination across sectors hinder effective park management.	Academic and government institution interviews

Table 8. Opportunities Data Analysis.

Opportunities (O)	Findings	Sources
Development of multi-stakeholder collaboration	Opportunities for collaboration among government, academics, communities, and the private sector through CSR programs.	Government institution interviews
Integration of technology and smart city concepts	Utilization of Wi-Fi, digital signage, and digital media to attract younger generations.	Government institution interviews
Strengthening historical branding through digital and educational approaches	Delivery of historical narratives in an interactive and contextual manner through park activities.	Government institution and academic interviews
Development of parks as an integrated public space network	Connectivity among urban parks as a unified urban public space system.	Academic interviews
Implementation of child-friendly and sustainable park concepts	Continuation of a positive image derived from previous awards and best practices.	Government institution interviews

Potential application of green technology	Opportunities to enhance ecological quality and sustainability of urban parks.	Government institution interviews
---	--	-----------------------------------

Several threats pose ongoing challenges to park development and place attachment (**Table 9**). Budget limitations and restricted execution capacity often reduce the effectiveness of planned programs. Vandalism, cable theft, and facility damage increase maintenance costs and compromise visitor comfort and safety. Environmental threats, including declining green cover and damaged vegetation, undermine the ecological quality of parks. In addition, regulatory constraints related to heritage conservation can limit physical interventions if not managed through sensitive and context-aware design approaches. Residual impacts from inadequate management in previous administrations further intensify these challenges.

Table 9. Threats Data Analysis.

Threats (T)	Findings	Sources
Budget constraints and limited implementation capacity	These constraints limit the flexibility and sustainability of development programs.	Government institution interviews
Vandalism and theft of park facilities	Increase maintenance costs and reduce environmental quality.	Government institution interviews
Decline in green cover and vegetation damage	Reduce ecological comfort and the overall attractiveness of urban parks.	Observation, visitor interviews, and park staff interviews
Restrictions on physical interventions due to conservation regulations	Complicate design adjustments without heritage-sensitive approaches.	Government institution interviews
Park degradation resulting from past policies and management practices	Burden current revitalization efforts and hinder the recovery of park quality.	Government institution interviews

Internal Factors

The urban parks of Banda Aceh possess various strengths that support their potential as spaces for community interaction within the context of place attachment (**Table 10**). These diverse potentials include natural elements, historical value, affective value derived from visitation experiences, and unique characteristics that distinguish them from other locations. At the same time, several weaknesses remain, particularly related to limitations and deficiencies in the provision of public space facilities. To ensure a more systematic analysis, the process of formulating development strategies also involves calculating weighted scores for each identified factor.

Table 10. Internal Factor Evaluation Matrix (IFAS)

No	Strengths	Weight	Rating	Score
S1	Strong social function and community activities	0.15	4	0.60
S2	Emotional bonds through memories and nostalgia	0.12	3	0.36
S3	Physical comfort provided by natural elements (vegetation and shading)	0.14	4	0.56

S4	Intrinsic historical value of urban parks	0.10	3	0.30
S5	Policy support and institutional openness	0.09	3	0.27
Total Strengths		0.60		2.09
No	Weaknesses	Weight	Rating	Score
W1	Low visitor awareness of historical values	0.10	4	0.40
W2	Limited availability and poor quality of public facilities	0.12	4	0.48
W3	Suboptimal cleanliness and environmental comfort	0.08	3	0.24
W4	Low perceived safety in certain park areas	0.06	3	0.18
W5	Fragmented inter-agency management and coordination	0.04	3	0.12
Total Weaknesses		0.40		1.42
Total Score				0.67

The weighting of internal factors was determined based on the criteria of the highest frequency obtained from quantitative data, the quality of visits and visitor experiences as reflected in emotional values, memories, and environmental comfort, as well as the consistency of findings across informants in relation to the local park context and existing conditions of Banda Aceh's urban parks.

A total score of 0.67 indicates that, internally, the urban park areas of Banda Aceh have considerable potential to support place attachment. This value reflects that the strengths of the parks outweigh their weaknesses, suggesting that these strengths can serve as the main assets in enhancing place attachment, although several weaknesses still require improvement.

External Factors

The urban parks of Banda Aceh face various opportunities that support, as well as threats that hinder, the formation of place attachment (**Table 11**). A range of opportunities can be adapted from experiences in improving and developing public spaces, both those already implemented in the studied parks and in other urban parks. These opportunities include leveraging institutional support and existing potential to enhance spatial quality. Conversely, certain threats may increase maintenance and development costs. To ensure a more systematic analysis, the process of formulating development strategies also involves calculating weighted scores for each external factor analysed.

Table 11. External Factor Evaluation Matrix (EFAS)

No	Opportunities	Weight	Rating	Score
O1	Multi-stakeholder collaboration and CSR programs	0.18	4	0.72
O2	Integration of digital innovation and smart city concepts	0.14	3	0.42
O3	Strengthening historical branding through digital approaches	0.12	3	0.36
O4	Development of an integrated urban park network	0.10	3	0.30
O5	Potential application of green technology and child-friendly park concepts	0.08	3	0.24

Total Opportunities		0.62	2.04	
No	Threats	Weight	Rating	Score
T1	Budget constraints and limited implementation capacity	0.14	4	0.56
T2	Vandalism and theft of park facilities	0.10	3	0.30
T3	Decline in vegetation quality and environmental conditions	0.08	3	0.24
T4	Regulatory restrictions related to heritage conservation	0.06	3	0.18
Total Threats		0.38	1.28	
Total Score				0.76

The weighting of external factors was based on opportunities for collaboration and ongoing program planning under the current mayoral administration. These conditions represent potential values, such as the implementation of digitalization and smart city concepts in urban parks, with an emphasis on historical values, as well as the application of child-friendly park concepts planned for the future development of Banda Aceh’s urban parks. These opportunities are aligned with efforts to prevent vandalism and park damage by certain individuals and to enable real-time monitoring and protection of historically valuable park areas.

A total score of 0.76 indicates that the urban parks of Banda Aceh have substantial opportunities that can be leveraged to enhance place attachment. This value suggests that external factors such as government support, digital innovation, and improvements in physical comfort can serve as key catalysts for strengthening place attachment. However, threats including vegetation degradation, vandalism, and dependence on permits and private event organizers need to be anticipated and effectively managed to ensure that development strategies can be implemented sustainably.

SWOT Matrix for Place Attachment

To formulate appropriate development strategies for enhancing place attachment in the urban park areas of Banda Aceh, an analytical tool capable of integrating various findings from questionnaires, interviews, and factor analysis is required. Therefore, a SWOT analysis is employed as a strategic approach to identify and classify internal factors (strengths and weaknesses) and external factors (opportunities and threats) that influence visitors’ attachment to urban parks (Table 12). The results of this analysis are then organized into a SWOT matrix, which serves as the basis for formulating contextual, targeted, and sustainable development strategy alternatives.

The SO (Strength–Opportunity) strategy indicates that Banda Aceh’s urban parks possess strong internal capital, particularly in terms of historical value, strategic location, and active social engagement. These strengths can be maximized by leveraging external opportunities such as community events, educational tourism potential, CSR support, and urban digitalization agendas. This highlights that the parks offer distinctive values not commonly found in other public spaces, especially in relation to historical narratives and cultural richness. These internal strengths can serve as a driving force for revitalization through public events, heritage tourism, and artistic activities.

Digitalization and green technology function as modernization tools without diminishing the parks’ historical identity. Strong public and community support reflect high social capacity,

indicating that collaborative strategies are likely to be effective. When properly managed, the parks can evolve into identity, rich public spaces that integrate historical heritage, community activities, and technological innovation, positioning them as vibrant urban activity centers with strong social value.

Table 12. SWOT Matrix

IFAS			
EFAS		Strengths (S)	Weaknesses (W)
Opportunities (O)	SO Strategies	<ol style="list-style-type: none"> 1. Develop urban parks as community-based social spaces integrated with digital technology and smart city concepts. 2. Utilize historical values and collective memory as interactive educational content through digital media and community activities. 3. Encourage collaboration among government, academia, the private sector, and communities through CSR-based park development. 4. Optimize natural elements and physical comfort as the main attractions of an integrated urban park network. 	WO Strategies <ol style="list-style-type: none"> 1. Enhance public understanding of park history through digital narratives, interactive signage, and educational programs. 2. Address facility limitations through CSR-based funding collaboration and sustainable design innovations. 3. Improve cleanliness and safety quality with the support of smart monitoring technologies. 4. Integrate inter-agency management through collaborative platforms and research-based evaluation.
	Threats (T)	ST Strategies <ol style="list-style-type: none"> 1. Rely on community involvement as social guardians to reduce vandalism and facility damage. 2. Utilize policy frameworks and regulatory support to manage historical parks through conservation-sensitive approaches. 3. Optimize the social functions of parks to maintain visitation despite budget constraints. 	WT Strategies <ol style="list-style-type: none"> 1. Establish phased and realistic priorities for the provision of basic facilities (toilets, lighting, and security). 2. Strengthen inter-agency coordination to avoid program duplication and budget inefficiencies. 3. Adopt conservative design approaches that preserve collective memory within the limits of heritage regulations.

The WO (Weakness–Opportunity) strategy illustrates how external opportunities can be utilized to address internal weaknesses that have hindered optimal park performance. Many of the parks’ weaknesses are technical and managerial in nature, including inadequate facilities, poor lighting, and climate-insensitive spatial arrangements. External opportunities such as CSR initiatives, citizen forums, academic re-search, and regulatory support create opportunities for targeted interventions in facility upgrades, climate-adaptive design, and historical rebranding. Digitalization and periodic research are essential for enabling data-driven and knowledge-based decision-making, helping to resolve issues such as weak historical branding and a lack of attractions. Government policy support enhances the legitimacy of improvement programs, allowing budgetary and authority related challenges to be addressed through inter-agency integration. Consequently, strong external opportunities can compensate for structural weaknesses, resulting in a more adaptive, intelligent, and participatory management system.

The ST (Strength–Threat) strategy focuses on using existing strengths to counter external threats. Historical identity and community activation act as primary defenses against threats such as the loss of heritage elements and vandalism. Strong social activities increase natural surveillance, reducing opportunities for neglected and unsafe spaces. The strategic location of the parks also facilitates effective communication and public engagement to mitigate resistance to physical changes.

By emphasizing historical identity and community-based artistic activities, the parks can maintain social relevance while reducing reliance on private actors. This approach supports independent place attachment development once community activities are sustained. The historical and social strengths of the parks are key instruments in safeguarding them from external threats, particularly those related to identity degradation and public safety, by enhancing awareness of heritage values and sustaining active community use.

The WT (Weakness–Threat) strategy is designed to minimize internal weaknesses while reducing external threats. Weaknesses such as deteriorating facilities, fragmented management, and climate-inappropriate design increase vulnerability to vandalism, public resistance, and slow licensing processes. The WT approach emphasizes comprehensive revitalization, covering both historical elements and vegetation, to mitigate the impact of non-adaptive policies. Strengthening security systems, improving facilities, and streamlining bureaucratic processes are critical defensive strategies to maintain park functionality and safety. Providing adaptive and inclusive facilities also helps reduce public resistance.

Strategic Implications

Overall, the strategic analysis indicates that Banda Aceh’s urban parks have strong potential as historical and community-based public spaces, with history, art, and social interaction forming the core foundation for development. Development opportunities supported by positive policy directions, tourism potential, government backing, CSR, digitalization, and public responsiveness create strong revitalization momentum. However, managerial and physical challenges, such as facility deterioration, weak management integration, and insufficient security, require immediate, structured intervention.

To translate these findings into practice, the following strategic actions are recommended:

1. **Policy and Governance:** Establish an integrated management system backed by mayoral decrees to streamline inter-agency coordination, particularly in resolving licensing and administrative bottlenecks.
2. **Socio-Historical Integration:** Strengthen historical identity by digitalizing park information and historical interpretations, while leveraging CSR programs and community forums to fund public events and educational tourism.
3. **Adaptive Design and Safety:** Implement climate-adaptive design and smart lighting systems to enhance comfort and safety. The development of "green tourism routes" should be prioritized to revitalize vegetation and protect historical elements from high-risk urban policies.
4. **Community Resilience:** Scale up community-based activities and adaptive facilities to reduce dependence on private developers, thereby fostering communal ownership and minimizing social resistance or vandalism through increased public surveillance.

Discussion

The findings of this study indicate that development strategies for urban parks in Banda Aceh must transcend physical improvements to specifically address the four primary dimensions of place attachment. The dominance of Quality and Area Interaction (SS Loading 7.87) confirms that Social Bonding is the fundamental pillar of visitor attachment in Banda Aceh. This aligns

with the tripartite framework of Scannell & Gifford, which identifies social interaction as a crucial element in the person-place relationship. Unlike studies in major metropolitan areas that often emphasize place dependence through modern sports facilities, visitors in Bustanussalatin and Putroe Phang Parks prioritize communal spaces for family gatherings and nostalgia, thereby strengthening the Place Affect dimension.

However, there is a sharp disconnect regarding the Place Identity dimension. Despite the parks' intrinsic historical value dating back to the sultanate era, the low level of historical awareness among visitors, as evidenced by interview results, suggests that this heritage has not yet been internalized into the personal identities of the users. This offers a new contribution to place attachment literature: high objective historical value does not automatically foster place identity without interactive and contextual narratives. The Banda Aceh case demonstrates that physical revitalizations that remove meaningful childhood elements actually weaken emotional attachment (affect), even if the design is considered more modern.

Strategically, the proposed integration of digital technology and smart city concepts is not merely a modernization effort, but a tool to bridge the gap in Place Dependence. By providing adaptive facilities and digital historical information, the parks can satisfy the functional needs of the younger generation while simultaneously rebuilding a fading cultural identity. Compared to previous empirical studies in other historic cities, the uniqueness of the Banda Aceh case lies in the high potential for multi-stakeholder collaboration (CSR and community forums) that is highly responsive to local policy directions (Mayoral policies). If managed through an integrated framework, this synergy can effectively mitigate threats such as vandalism and ecological degradation through a sense of communal ownership.

Conclusion

The development of urban parks in Banda Aceh hinges on a multidimensional approach that synchronizes historical preservation, social vitality, and technological adaptation. This study concludes that place attachment is not merely driven by physical attributes, but is deeply rooted in culturally meaningful and historically resonant environments. The findings indicate that while Banda Aceh's parks possess significant historical and social capital, their optimization requires a shift from fragmented management to an integrated, collaborative framework. Ultimately, creating a sustainable urban park network necessitates a balance between maintaining historical narratives and embracing contemporary innovations to ensure the spaces remain relevant and emotionally resonant for the community.

To enhance place attachment in Banda Aceh's urban parks, four strategic directions are proposed:

1. **Digital-Historical Branding:** Implementing digital interpretation tools (e.g., QR codes and AR) to bridge the place identity gap by reconnecting visitors with the park's sultanate-era historical narratives.
2. **Adaptive Infrastructure:** Upgrading core facilities (lighting, sanitation, and prayer rooms) to enhance place dependence, ensuring the park meets modern functional needs and safety standards.
3. **Social Vitality Zones:** Optimizing communal spaces to foster social bonding, leveraging the study's finding that social interaction is the primary driver of visitor attachment.
4. **Collaborative Governance:** Establishing an integrated management framework between government (DLHK3), private sectors (CSR), and communities to ensure long-term maintenance and administrative efficiency.

Acknowledgments

The author would like to express sincere gratitude to the Department of Environment, Sanitation, and Green Open Spaces of Banda Aceh (DLHK3) for their support, cooperation, and valuable insights throughout the research process. Special appreciation is also extended to the park management officers of Bustanussalatin Park, Putroe Phang Park, and Sari Gunongan Park for their assistance, openness, and willingness to share information and experiences that greatly enriched this study.

The author also gratefully acknowledges the park visitors who generously participated in interviews and questionnaires, sharing their time, experiences, and perspectives. Their contributions provided essential insights into community perceptions, memories, and attachments to the urban parks, and were invaluable to the completion of this research.

Conflict of Interest

The authors declare no conflict of interest. It is noted, however, that data collection through interviews with managing agencies was subject to time constraints due to administrative schedules. Despite these limitations, the research was conducted independently, and the findings remain objective and independent of any institutional influence.

Author Contribution Statement

Ulya Ananda Permatasari: Writing original draft, Project Administration, Conceptulization, Data Curation. **Mirza Irwansyah:** Supervision, Methodology. **Evalina Zuraidi:** Supervision, Methodology

Data Availability Statement

The data used in this study consist of questionnaire results that identify the most dominant findings from the analysis of visitors' responses. These data are further strengthened by interview data obtained from visitors, relevant government stakeholders, and academics with expertise in the field. The data obtained consist of narrative data that were transcribed and categorized into thematic groups before being formulated into strategies for park area development. The data are available upon reasonable request and are provided in anonymized form to ensure confidentiality.

Ethics Approval

Data collection was conducted following an informed consent process, ensuring that all participants voluntarily agreed to take part in the study. Confidentiality was strictly maintained, and all ethical procedures were implemented to safeguard the privacy boundaries of informants. The research design and data collection process avoided any elements that could infringe upon participants' rights, cultural norms, social values, or personal sensitivities. All information provided by participants was treated with respect and used solely for academic and research purposes.

References

- [1] İ. Eren, E. Özlem, A. Aktan, and A. Altanlar, "Redefining Public Space : The Evolution of Meaning in the Digital Era," in *Proceedings of the International Conference on Research in Social Sciences*, Diamond Scientific Publishing, 2024, pp. 1–13.
- [2] A. Skaržauskiene and M. Maciuliene, "Assessment of Digital Co-Creation for Public Open Spaces : Methodological Guidelines," *informatics*, vol. 6, no. 39, pp. 1–10, 2019.
- [3] W. C. Sullivan and C. Chang, "Landscapes and Human Health," 2017, doi: 10.3390/ijerph14101212.

- [4] S. A. Salih and S. Ismail, "Criteria for Public Open Space Enhancement to Achieve Social Interaction : a Review Paper Criteria for Public Open Space Enhancement to Achieve Social Interaction : a Review Paper," in *International Conference on Architecture and Civil Engineering*, IOP Publishing, 2017, pp. 1–9. doi: 10.1088/1757-899X/291/1/012001.
- [5] M. Wojnowska-heciak, M. Suchocka, M. Błaszczyk, and M. Muszy, "Urban Parks as Perceived by City Residents with Mobility Difficulties : A Qualitative Study with In-Depth Interviews," *Int. J. Environ. Res. Public Health*, vol. 19, pp. 1–19, 2022.
- [6] A. C. Diener and J. Hagen, "THE POWER OF PLACE IN PLACE ATTACHMENT," *Geogr. Rev.*, vol. 00, no. 00, pp. 1–5, 2021, doi: 10.1080/00167428.2021.1884983.
- [7] G. Erfani, "Reconceptualising Sense of Place : Towards a Conceptual Framework for Investigating Individual-Community-Place Interrelationships," *J. Plan. Lit.*, vol. 37, no. 3, pp. 452–466, 2022, doi: 10.1177/08854122221081109.
- [8] P. Sarah, "Identifikasi memori kolektif masyarakat banda aceh terhadap taman putroe phang," Banda Aceh, 2024. [Online]. Available: <https://repository.ar-raniry.ac.id>
- [9] K. Amri, M. Fuady, and M. Irwansyah, "Public Space Quality Analysis of Putroe Phang Park in Banda Aceh City," in *Journal of Physics: Conference Series*, IOP Publishing, 2024, pp. 1–8. doi: 10.1088/1742-6596/2916/1/012010.
- [10] Pemerintah Kota Banda Aceh, "Rencana Tata Ruang Wilayah Kota Banda Aceh Tahun 2009-2029 / revisi tahun 2017," Kota Banda Aceh, 2018. [Online]. Available: <https://bappeda.bandacehkota.go.id>
- [11] M. Sewell and N. Ntounis, "Losing and restoring a place's identity: an historical analysis of Colchester's place brand through the lens of the useable past," *Cities*, vol. 165, no. June, p. 106121, 2025, doi: 10.1016/j.cities.2025.106121.