



PLANNING MALAYSIA:

Journal of the Malaysian Institute of Planners

VOLUME 24 ISSUE 2 (2026), Page 476 – 494

INCREASING ALLEY COGNIZANCE TO IMPROVE COMMUNITY SAFETY IN KUALA LUMPUR: A CRITICAL STUDY OF REVITALISED URBAN ALLEY

**Wan 'Iffah Wan Ahmad Nizar, Nor Syahila Ab Rashid,
Wan Norisma Wan Ismail, Nurul Syala Abdul Latip,
Noor Hayati Ismail, Azhani Abd. Manaf**

*Department of Architecture,
UNIVERSITI SAINS ISLAM MALAYSIA*

Abstract

Urban alleys are often overlooked yet hold significant potential for transformation within densely populated cities where public spaces are scarce. This research explores the creation of a branding and wayfinding framework aimed at enhancing public awareness and community safety in alleyways in Malaysia. Drawing on urban design principles, spatial perception, and place-making concepts, the study employs a multi-phase approach that includes a literature review, field observations, participatory workshops, and experimental simulations. Findings from the study reveal several challenges, such as poor spatial clarity, a lack of cohesive visual language, and insufficient user-centered signage. These issues contribute to negative perceptions and the underuse of these alley spaces. Workshops conducted with local residents, municipal officials, and urban design experts provided valuable insights into the socio-cultural factors influencing how these alleys are used and perceived. This information guided the development of a branding and wayfinding framework that incorporates visual identity systems, navigational aids, and design strategies tailored to the local context and community needs. Although this framework is specifically tailored for Malaysian urban environments, its underlying principles can be adapted to other similar high-density areas. This study adds to the discourse on alley revitalization and offers practical strategies for integrating underappreciated urban spaces into broader plans for inclusive, human-centered city planning.

Keywords: Urban Alleys, Wayfinding, Branding, Community Safety, Place-Making, Micro-Urban Design

¹ Corresponding author. Email: wan.iffah@usim.edu.my

INTRODUCTION

Urban alleys frequently emerge as a significantly overlooked dimension of urban infrastructure, typically associated with issues of safety, cleanliness and relevance to urban life. Within the past few years, in the Malaysian urban context, revitalization efforts aimed at rejuvenating these spaces have begun to gain traction, particularly in the densely populated areas like Kuala Lumpur. However, these endeavours remained disjointed and sporadic and largely fragmented due to the lack of comprehensive guiding frameworks. The prevailing approach tends to prioritize art-based beautification initiatives, which while visually appealing, one might argue, often fail to address essential underlying issues such as connectivity, spatial legibility and community safety (Papaioannou et al. (2020); Global Designing Cities Initiative (2024)).

Central to this discourse is the fundamental research question of how enhancing public cognizance and understanding of urban alleys can contribute to improved community safety outcomes. While urban safety is often traditionally associated with crime statistics and surveillance infrastructure, recent research has shifted focus towards perceived safety, particularly within urban spaces such as alleys. In this framework, community safety is less about actual incidences of crimes, but more deeply tied to the perception of space, surroundings, understanding of spatial layout and user confidence in navigating the areas (Barker et al., 2023)– all of which directly related to wayfinding and alley cognizance in building user perception. Numerous studies indicate that disorienting, unmarked, or fragmented environments can heighten feelings of insecurity, even in regions with low crime (Türkseven Doğrusoy and Zengel, 2017; Kawshalya, et.al, 2022). This shift in perspective emphasizes the importance of examining spatial factors that influence community safety.

Moreover, pervasive negative perceptions surrounding alleys often stem from a confluence of factors, including anecdotal hearsay, detrimental media portrayals, and isolated negative experiences that color public sentiment. These perceptions not only influence individual behavior but also manifest as systemic barriers that discourage investment in and utilization of these vital urban spaces (Ellis, 2022). Evidence suggests that enhancing spatial understanding and instituting effective wayfinding strategies could substantially alleviate these concerns and catalyze a more positive engagement with alley environments.

LITERATURE REVIEW

The Interplay Between Alley Cognizance and Community Safety

Modern urban research increasingly suggests that how we feel in a city has less to do with actual crime statistics and more to do with how well we can "read" our surroundings. Askarizad et al. (2024) point out that the discomfort many feel in

narrow lanes stems from spatial ambiguity—the anxiety of not knowing where a path leads or who "owns" the space. Similarly, Ryan and Hill (2022) demonstrated that the presence of wayfinding elements such as signage, directional cues, and identifiable landmarks greatly enhances perceived safety in urban green spaces. These findings are built on Kevin Lynch's landmark work on legibility; if a space is easy to navigate and mentally map, it feels safer. In this study, "Alley Cognizance" refers to this very awareness—the public's ability to recognize, navigate, and trust these lanes as essential, safe shortcuts rather than hidden, high-risk voids. It includes the ability to recognize, navigate, and engage with alleys, as well as understanding their roles such as shortcuts, cultural pathways, or commercial areas while feeling oriented and safe in these spaces.

Cities like Melbourne and Seoul existing rejuvenation strategies further showcase the effectiveness of integrating wayfinding and branding strategies to enhance public perception and utilization of urban alleys. Particularly, in Seoul's urban revitalization efforts, it emphasizes the importance of place-naming, cohesive signage systems, and recognition of spatial patterns, thereby fostering both identity and navigability (HCMA, 2024). Such design strategies address cognitive barriers that often deter individuals from exploring these spaces, which are frequently shrouded in uncertainty (Jonas, 2021) due to its ambiguity in status of ownership. Also, cognitive mapping research substantiates the notion that individuals experience heightened vulnerability in areas lacking mental visualization or predictability, underscoring the necessity for spatial clarity. This concern is particularly relevant to existing Malaysian urban alleys, where inadequate naming, signage, and visual cues create a psychological disconnect, despite robust physical connectivity.

Global benchmarks like Melbourne and Seoul have turned this theory into practice by using branding to clear the "shroud of uncertainty" that often surrounds back lanes. In Seoul's revitalization, the focus wasn't just on cleaning up, but on spatial storytelling through place-naming and cohesive signage. This is particularly relevant to the Malaysian context, where a lack of formal naming or visual cues often creates a psychological disconnect, leaving residents feeling vulnerable in spaces that are physically well-connected but mentally "blank."

Urban design literature increasingly recognises alleys as vital micro-urban elements that, when designed effectively, can enhance walkability, bolster urban resilience, and foster a sense of local cultural identity. Nizar (2020) highlights that the roles of alleys in urban contexts are identified as essential to the five needs of a city: 1) walkable space, 2) social space, 3) passage of expression, 4) channel for cultural exhibition and local economic growth, and 5) utility needs. And for the alleys to play their role effectively, focusing on relevant urban design elements are fundamental, emphasizing on the form and function of

the alleys, their visibility, and branding, which consequently enhance walkability, resilience, and identity.

Regional Perspectives: Alley Rejuvenation in Southeast Asia

In Southeast Asia, the revitalization of alleys (or lorong) often involves a delicate balance between modern tourism and local heritage. In Singapore's Kampong Gelam, the Urban Redevelopment Authority transformed utilitarian back lanes into "Art Lanes," proving that vibrant murals and consistent paving do more than beautify—they increase "eyes on the street" by drawing in foot traffic. Similarly, Bangkok's "Hidden Bangkok" initiative in the Talat Noi district used community-led street art and heritage signage to break down cognitive barriers. By turning a confusing maze into a curated experience, the project reduced the perceived "threat" of the unknown.

Even in Ho Chi Minh City, "alley greening" projects have shown that when residents place potted plants and shared seating in their hẻm (alleys), the space begins to look "cared for." This visual cue of stewardship is a powerful deterrent to anti-social behavior, as it signals that the community is actively watching and claiming the space.

The Three Pillars of Revitalization

To understand how an alley moves from "neglected" to "navigable," this research looks at three overlapping layers: Urban Design, Spatial Perception, and Placemaking.

Urban Design acts as the physical foundation. According to Nizar (2020), for an alley to truly function, it must meet five basic urban needs: it must be walkable, social, expressive, culturally relevant, and functional for utilities. In Kuala Lumpur, design elements like lighting and surface quality are the first steps in creating "passive surveillance." When an alley connects two busy streets with clear sightlines, it naturally feels safer because users feel visible rather than trapped.

Spatial Perception is the "software" of the user experience. It's about how environmental cues—like a specific color of paint, a recurring texture, or a well-placed lamp—guide a person through a space without them needing a map. Wayfinding isn't just about signs; it's about spatial rhythm. Research in Manila's high-density corridors suggests that even simple visual consistency, such as a unified color scheme at alley entrances, can significantly boost a user's "predictability" of the path ahead, lowering their stress levels.

Finally, Placemaking provides the human soul. This is where the community takes ownership through personal touches like shopfront decorations or shared seating. Successful placemaking, as seen in projects like San Francisco's Clarion Alley or the greening projects in Belfast, turns a "passage"

into a "destination." When an alley hosts a mix of users—vendors, children, and the elderly—it proves that the space is inclusive. This sense of belonging is the ultimate form of security; it transforms a narrow back lane into a trusted communal asset.

Table 1: Domains of Alley Cognizance and Community Safety based on Literature Review

	Urban Design	Spatial Perception	Place-making	Review Points
Turkseseven Dogrusoy and Zengel, (2017)	/	/		
Kawshalya, et.al (2022)		/		
HCMA (Vancouver, 2024)	/	/	/	Strategy emphasizes naming, signage, visual cues, and social spaces
Ellis (2022)		/		
Askarizad et al. (2024)	/	/	/	Alleys connected to main streets improve network intelligibility and walkability.
Ryan and Hill (2022)	/	/		
Bellingham Alley Guidelines (2021)	/	/		Recommends compatible materials, lighting, and clear pedestrian access
Lim & Pae (2021)	/	/	/	Named laneways with signage enhance usability and cultural identity
Jonas (2021)		/		Alley greening improves social use and perception of safety
Kim & Lee (2020)		/	/	
Sustainable Urban Design Guidelines (2022)	/	/	/	

Source: Tabulated by Author, 2025

Table 1 shows that spatial perception is one of the most vital elements in rejuvenation efforts. Thus, this study draws on the three interconnected theoretical domains that inform the conceptual underpinning of the research: i) urban design, ii) spatial perception, and iii) place-making. Each of these domains contributes to understanding how underutilised urban spaces, such as alleys, can be reimagined through thoughtful design interventions.

1) Urban Design Elements

Urban design directly influences alley usability by improving walkability, visual coherence, and public identity. Well-connected alleys, especially those linking residential blocks to key urban paths, promote foot traffic

and passive surveillance; both which are critical for perceived safety (Askarizad et al., 2024). The Institute of Transportation Engineers (ITE, 2023) recommends context-sensitive approaches for alleys, highlighting lighting, surface quality, and enclosure to boost spatial comfort and clarity. Municipal guidelines, such as Bellingham's alley redevelopment strategy, emphasize benches, planters, and consistent paving as tools to support both movement and pause (City of Bellingham, 2014).

Complementing this, urban resilience frameworks suggest alleys become more legible and inclusive when local culture is reflected in their design. In Miami, alley upgrades that include motifs, murals, and shaded seating improved both environmental adaptability and public engagement (Crociati, 2020). The Los Angeles Urban Design Principles (2020) similarly stress that integrating heritage and visual continuity reduces spatial anonymity and encourages ownership. These strategies underscore how thoughtful alley design strengthens spatial cognition and, in turn, fosters community safety.

Re-Branding

Revitalising alleys presents an opportunity to rebrand these often-overlooked spaces by emphasising their physical, sensory, and symbolic identities. Effective branding, using visual language and cultural references, can challenge negative perceptions, align alleys with local narratives, and reintegrate them into the urban fabric.

2) Spatial Perception

Effective wayfinding and legibility are central to how individuals navigate and feel within urban environments. Spatial perception shapes mental maps and determines how users identify, interpret, and move through a place (Lynch, 1960). In alley contexts, features like clear signage, consistent visual cues, and intuitive visibility at entrances or junctions are essential to reduce confusion and anxiety (Arthur & Passini, 2002; Hölscher et al., 2013). When such features are absent, users may avoid the space altogether, regardless of actual safety.

Studies on urban legibility suggest that well-placed landmarks, lighting, and spatial rhythm (repetition in textures, colors, and materials) increase cognitive clarity and perceived safety, especially in less formal or secondary spaces like alleys (Montello, 2005; Nasar & Jones, 1997). For instance, the Seoul alley regeneration projects incorporated coordinated lighting and cultural iconography to guide users, making alleys more welcoming at night (Jung et al., 2021). In summary, reinforcing spatial perception through wayfinding elements not only improves user comfort but transforms alleys into navigable, functional extensions of the urban grid.

Environmental Cues

Wayfinding literature further develops this understanding by emphasising the importance of environmental cues such as signage, spatial organisation, lighting, and colour in supporting movement and orientation within complex urban settings. Poorly designed environments often cause confusion, lower usage, and perceptions of insecurity, especially in secondary or peripheral areas like alleys. Conversely, well-coordinated wayfinding systems improve not only navigational clarity but also boost user confidence and spatial inclusivity.

Research highlights that environmental cues such as signage, spatial organisation, lighting, and colour are essential for effective movement and orientation within complex urban spaces. When these elements are poorly implemented, users often face confusion, decreased usage, and increased perceptions of insecurity, particularly in peripheral areas like alleys (Hölscher et al., 2019; Townscape and Wayfinding, 2023). On the other hand, cohesive wayfinding systems; featuring clear signage, visible landmarks, strategic lighting, and visual consistency not only enhance navigational clarity but also foster user confidence and promote inclusive spatial access (Segd, 2024; Hölscher et al., 2019).

3) Place-making

The third theoretical pillar, place-making, highlights the social and cultural aspects of spatial transformation. Drawing on the work of scholars like Jane Jacobs and William H. Whyte, place-making promotes human-centred design that reflects community values and encourages social cohesion. Successful place-making involves participatory processes, where local stakeholders actively shape the identity and function of shared spaces.

Place-making emphasizes designing urban alleys to foster social interaction and reflect community values, which encourages local ownership and sustained use. Observing social interaction zones, which are areas where people can convene, pause, or converse, helps evaluate whether an alley supports everyday communal activities (Borini & Campioli, 2024). The presence of community signage or art, such as murals or posters, indicates local engagement and identity-building, as demonstrated in Belfast's green alley projects that blend environmental resilience with community narratives (Alley Greening Project, 2023). Assessing maintenance and cleanliness reveals community stewardship and the alley's perceived safety: well-maintained spaces typically attract more consistent usage and care (Alley Greening Project, 2023).

Resident and business involvement is demonstrated through personal touches like shopfront decorations, shared seating, or community art, which foster a sense of belonging and reduce neglect. Examples such as San Francisco's

Clarion Alley show how murals reflect collective identity (Clarion Alley Mural Project, 2024). Observing diverse user presence which include children, elderly, vendors also indicates whether alleys serve everyday life or merely function as attractions (Borini & Campioli, 2024).

Table 2: Domains of Alley Cognizance and Community Safety in this study

Theoretical Domain	Core Focus	Relevance to Alley Design
Urban Design	Form and function of urban spaces, visibility and branding	Enhances walkability, resilience, identity
Spatial Perception	Wayfinding, legibility, mental mapping	Improves spatial navigation and user comfort
Place-Making	Social interaction and community values	Encourages ownership and sustained use

Source: Tabulated by Author, 2025

RESEARCH METHODOLOGY

The research adopts a multi-dimensional approach to examine the revitalization of urban alleys in Malaysia, grounded in a triangulation of qualitative and empirical methods. To establish a robust theoretical foundation, a comprehensive literature review and policy analysis were conducted, utilizing academic databases, peer-reviewed journals, and institutional reports. This phase was critical for identifying existing policy gaps and articulating the intersection between urban design, spatial perception, and placemaking. Rather than viewing these as isolated concepts, the study integrates them into a singular framework where physical design interventions (placemaking) are evaluated through their ability to enhance user "readability" (spatial perception), which ultimately fosters a heightened sense of communal security (urban design).

Additionally, participatory workshops engaged local communities, municipal authorities, and urban design professionals to explore the socio-cultural dimensions of alley usage. These workshops incorporated focus group discussions, participatory mapping, semi-structured interviews, community feedback forms, and interactive design charettes to gather diverse perspectives.

Case Selection

A qualitative observational study was conducted in five revitalised alleys across two key areas in Kuala Lumpur where five alleys were selected as the basis for fieldwork due to their varying degrees of placemaking efforts, visibility, and physical interventions: 1) Central Market Area: i) Lorong Panggung, ii) Lorong

Bandar 21, and iii) Kwai Chai Hong. And 2) Bukit Bintang Area: i) Jalan Rembia Street Art, and ii) Wall Art Changkat Art Lane.

Each of these revitalised alley cases provides varying degrees of wayfinding clarity, artistic expression, and public accessibility, making them suitable comparative examples for examining the impact of placemaking and urban storytelling within limited city spaces. To increase cognizance of alleys for community safety, observations were aligned with the theoretical domains using specific indicators:

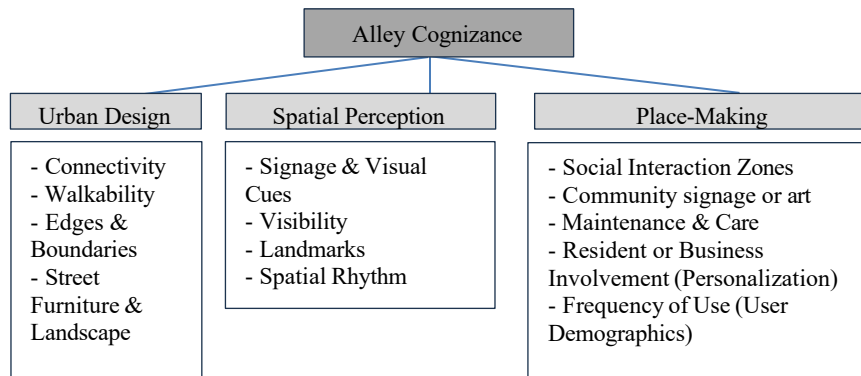


Figure 1: Indicators of Alley Cognizance for the Five Selected Alleys

Source: Author's Record (2025)

These indicators served as the foundation for site assessments, complemented by participatory workshops with local residents and businesses to explore their perceptions, behaviours, and feedback. Thus, to ground these theories in reality, field observations were conducted across five purposively selected alleys in Kuala Lumpur, categorized into two primary clusters: the Central Market Area (Lorong Panggung, Lorong Bandar 21, and Kwai Chai Hong) and the Bukit Bintang Area (Jalan Rembia Street Art and Wall Art Changkat Art Lane). These sites were selected due to their varying degrees of placemaking maturity and visibility, offering a rich comparative landscape for examining urban storytelling. Observations were structured around specific indicators of alley cognizance, using tools such as spatial mapping, pedestrian flow tracking, and environmental audits. This empirical data provided a "tangible" map of how spatial rhythm and physical legibility influence how a space is navigated.

The "intangible" dimensions of the research were captured through participatory workshops, which served as a bridge between professional planning and local lived experience. Participants were selected via purposive sampling to

ensure a balanced representation of three distinct cohorts: local residents and business owners (primary users), municipal authorities from DBKL (policy enforcers), and urban design professionals (technical experts). These workshops employed interactive design charrettes and participatory mapping to collect qualitative data on user perceptions, emotional resonance, and cultural identity. By identifying specific "comfort zones" and "blind spots" through community feedback, these sessions directly influenced the development of the branding and wayfinding framework, ensuring that proposed navigational cues are rooted in the community's collective memory and cultural context.

The resulting data were synthesized through a dual-lens analytical framework that balances "Alley Cognizance" with "Community Safety." The first lens emphasizes the readability of the space –the degree to which an alley is recognizable and understandable –while the second lens focuses on user perception, evaluating whether individuals feel oriented and secure. By integrating these two perspectives, the research provides a comprehensive understanding of how both tangible design interventions and intangible community values shape the performance of revitalized alleys within an urban Islamic context. This integrative approach ensures that the findings are not merely architectural observations, but a reflection of the socio-cultural pulse of the city.

Analytical Framework

The analysis was performed through a dual-lens framework:

Table 3: Dual-lens Analytical Framework

Category	Description
Alleys' Cognizance	Emphasizing on "readability" of the alley – the degree to which an alley space is recognizable, understandable, and navigable by its users, visibility, physical legibility, spatial rhythm, and pedestrian accessibility.
Community Safety	Informed through the lens of user perception (perceived safety) which is shaped by user experience, whether they feel oriented, informed, and secure navigating the alleys–approachable, familiar, and trusted, thus contributing to a stronger sense of communal security.

This integrative framework enables a comprehensive understanding of how both tangible design and intangible values shape the perception and performance of revitalised alleys within an urban Islamic context.

ANALYSIS AND DISCUSSION

Field Observation

The selected sites consist of two main clusters: the Bukit Bintang art lanes (Jalan Rembia and Changkat Street Art) and the Central Market alleys (Lorong Panggung, Lorong Bandar 21, and Kwai Chai Hong).

Generally, the alleys in Kuala Lumpur and these two specific areas are well-connected. Most of the alleys in these locations fall within the 'collector' category (Nizar, 2020), referring to routes that gather numerous streets and link them to other main roads in the hierarchy. They serve as primary local distributors to their immediate surroundings and connect deeper routes to arterial junctions, making them more connective rather than isolated or separate from the network. This illustrates the immense potential of implementing a rejuvenation strategy for a network of alleys that enable visitors to explore the city in a more intimate atmosphere through the alleys – aligning with the field observation findings, these alleys primarily serve as tourist attractions rather than everyday urban routes.

Bukit Bintang's alleys focus mainly on art-led revitalisation, showcasing vibrant murals but minimal infrastructural upgrades beyond surface-level aesthetics. Conversely, the Central Market cluster demonstrates a wider variety of design approaches, with more consideration given to the context. While Lorong Bandar 21 suffers from poor maintenance, Lorong Panggung incorporates cultural motifs within its Indian temple context, and Kwai Chai Hong functions as a well-planned space with coordinated furnishings and activity-driven spatial design. Despite these revitalisation efforts, the absence of a unified visual identity and lack of navigational aids hinders their effectiveness in fostering alley recognition and enhancing overall community safety.

Urban Design

As seen in Figure 2, both Bukit Bintang and Central Market show a solid underlying network of physical connections, but this is weakened by a lack of visual cues. In Bukit Bintang, surface upgrades and aesthetic improvements through murals are noticeable; however, the absence of directional signs, consistent paving, and clear thresholds creates a disjointed experience. The alleys feel like isolated pockets rather than an interconnected system. In the Central Market area, the alleys are in mixed condition: Kwai Chai Hong stands out with thoughtful activity-based design and quality street furniture, while Lorong Bandar 21 remains poorly maintained, reducing its potential as a safe and accessible route. These inconsistencies highlight how design interventions, when not planned holistically, fail to convey the continuity and purpose of alley networks, thereby limiting their effectiveness in improving both awareness and community safety.

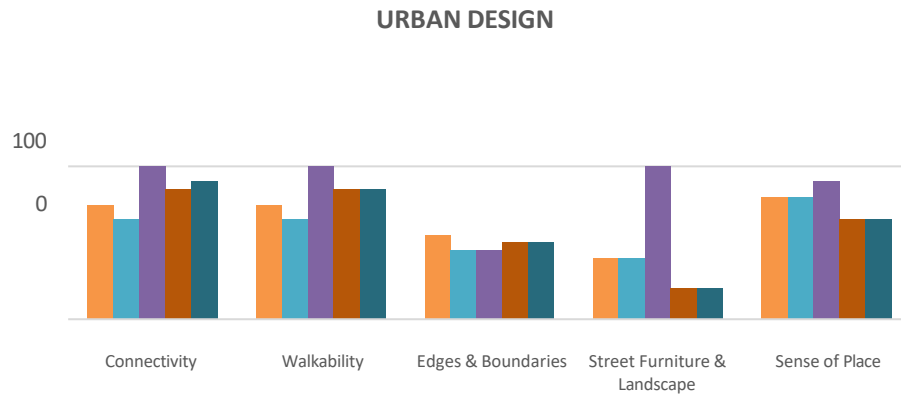


Figure 2: Urban Design Elements of Five Selected Alleys
Source: Author's Record (2025)

Spatial Perception

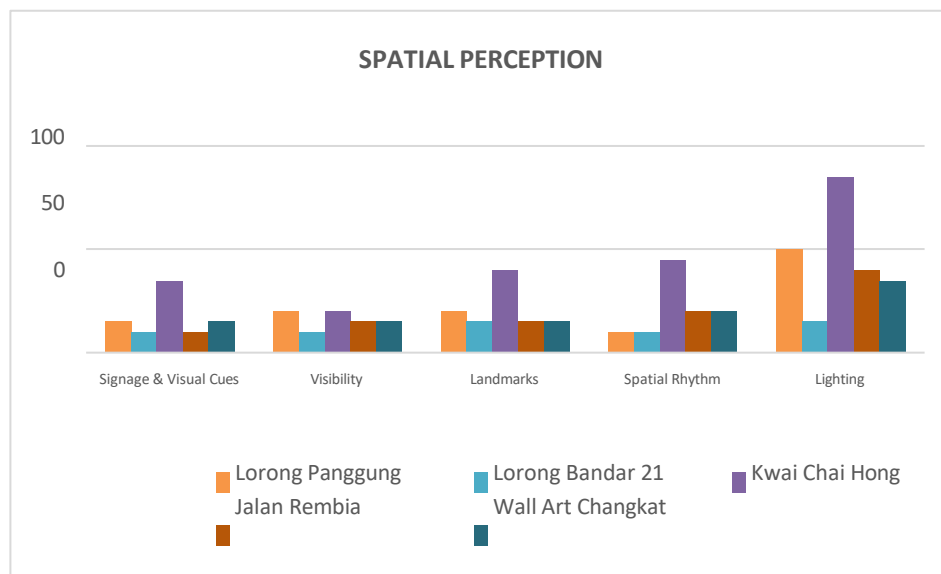


Figure 3: Spatial Perception of Five Selected Alleys
Source: Author's Record (2025)

Similarly, spatial perception, as shown in Figure 3, in both Bukit Bintang and Central Market alleys is severely hindered due to the cumulative absence of key navigational and cognitive cues. Signage is often inconsistent or

entirely missing, and frequently generic and unhelpful, offering little guidance for unfamiliar users. It is recorded that only Lorong Bandar 21 has a signage indicating the alley's name at its entrance, but it is almost always obscured by vendors lining up along the boundary of the space. Other alleys lack any signage showing their names, and there is very little signage providing information about what occurs inside the alleys.

Landmarks such as distinctive lighting fixtures, archways, or culturally symbolic art pieces are important for anchoring spatial memory, which are seldom used or poorly placed. Entrances feel unwelcoming and lack clear indicators of direction or connectivity, leading to confusion and discouraging exploration.

The studied rejuvenated alleys also lack a cohesive visual rhythm across surfaces, lighting, and materials, resulting in disjointed experiences that impair mental mapping with no clear indication of the end or their connection to the revitalised alleys nearby the selected ones. This widespread ambiguity reduces user comfort and fosters perceptions of these alleys as unsafe, unfamiliar, and socially disconnected from the surrounding urban environment, further discouraging pedestrians from using them or perceiving them positively.

Place-Making

Interestingly, place-making data of the five selected alleys shown a more diverse read. While Bukit Bintang art lanes are visually striking due to their vibrant murals, they lack opportunities for meaningful public interaction. The absence of social spaces such as benches, shaded areas, or communal gathering zones greatly limits social engagement, reducing the alleys to mere backdrops for photographs.

Central Market alleys show a greater sense of personalisation, with local cultural elements incorporated into shopfronts and decorations. However, they also suffer from insufficient infrastructure to support stationary social activities. There are few, if any, designated zones for lingering, communal exchange, or informal use by residents and visitors alike. As a result, people tend to pass through these alleys quickly, viewing them as visual attractions rather than integral parts of their daily urban lives. The significant absence of spatial-perception elements, such as clearly defined social spaces or interactive street furniture, contributes to the perception that these alleys are transient, decorative, and disconnected from the broader aims of community building and everyday utility.

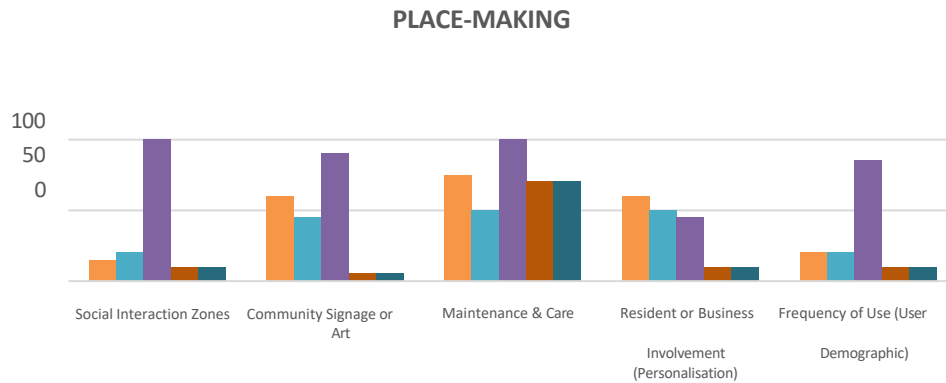


Figure 4: Place-Making of Five Selected Alleys
Source: Author's Record (2025)

Among the five selected rejuvenated alleys, Kwai Chai Hong appears to attract the highest number of users daily, comprising both visitors and residents. The graph in Figure 4 illustrates a correlation between social interaction zones and user frequency, where designated spaces for social interaction allow pedestrians and visitors to linger and explore the alleys comfortably. With more people lingering around and using them, the alley is perceived as safer and more comfortable to use. Furthermore, Kwai Chai Hong's larger scale, in terms of urban design (as shown in Figure 2), spatial perception (as shown in Figure 3), and place-making (as shown in Figure 4), contributes to a higher user frequency compared to the other alleys.

Participatory Workshop Insights

To supplement the site observations, a community workshop was organised with residents from the Bukit Bintang and Central Market areas, specifically surrounding the selected revitalised alleys including residents, business owners, and frequent visitors, with local authorities also present. The aim was to gather direct feedback on the public's perception of revitalised alleys and the improvements they consider necessary.

Findings from the workshop revealed a recurring sentiment: most revitalised alleys currently serve more as attractions than as active parts of the urban circulation network. While residents recognised the visual enhancements and artistic value, many expressed that these spaces are not used for navigating or exploring the city, hence the low number of users. The participants pointed out that even during peak visitor hours, movement within the alleys is very limited, where they usually come just to take pictures and then leave without lingering or visiting the nearby businesses. The absence of furniture, landscapes, and greenery

was mentioned several times as the reason, alongside the lack of signage or information given to the visitors and users. Moreover, the alleys are mainly utilised by those already familiar with them, and even then, users highlighted their lack of convenience due to unclear connectivity and the absence of rest areas or social spaces.

Participants also felt that the revitalised alleys did not significantly benefit local businesses or reflect the local culture. Where cultural expression was present, it was seen as insufficient or superficial. The most critical concern voiced was the lack of ownership and identity, where residents felt that the alleys did not belong to them, as they lacked names, narratives, or any reflection of the community's heritage. Instead, the alleys felt staged for outsiders, serving decorative purposes without fostering a genuine sense of pride or belonging.

Key Elements for Wayfinding and Branding Framework

Based on the workshop insights, several key elements emerged as essential for inclusion in any future alley revitalisation framework or guideline:

Table 4: Key Elements for Wayfinding and Branding Framework

Category/ Element	Description / Offences
Naming & Identity	Clearly defined alley names that reflect either connectivity, specific activities, or historical context. Participants noted that generic names such as "Street Art" fail to communicate place identity or cultural value, often reducing the alleys to superficial attractions.
Comprehensive Signage & System	A wide range of signage is needed; directional signs to show pathways, informational signs to indicate functions and nearby landmarks, and contextual signs to explain history or purpose, all strategically placed throughout the alley network.
Cohesive Visual Cues & Branding	Establishing a cohesive visual identity using color schemes, repeated motifs, or symbolic references tied to local heritage. These visual strategies should also reinforce connectivity between different alleys, forming a unified system rather than isolated interventions.
Anchoring Landmarks	The use of physical markers such as gateway arches, symbolic sculptures, or thematic lighting to clearly indicate the start and end of alley journeys, aiding memory and orientation.
Mapping Tools Integration	On-site map boards, printed brochures, and digital tools to communicate connectivity, functions, and destination points effectively to both locals and visitors. Integrating digital and interactive mapping tools such as Augmented Reality (AR), Virtual Reality (VR) and QR codes as part of gamification in exploring the city and alleys were mentioned to be highly desirable by the residents.

Category/ Element	Description / Offences
Supportive infrastructure	The inclusion of street furniture, landscaped areas, and proper lighting to support stationary activities and encourage informal social interaction. These elements help activate the alley space and improve perceptions of comfort and safety, with Kwai Chai Hong serving as a notable benchmark.

Source: Tabulated by Author (2025)

These key elements as tabulated in Table 4 are identified as crucial to include, if not as the starting point, for rejuvenating efforts in revitalising alleys in densely populated areas like Kuala Lumpur. The feedbacks from the workshop align with the observation where Kwai Chai Hang receives a high number of users, with almost all of the key elements present in the alley, demonstrating the potential for revitalised alleys to be fully utilised by visitors exploring the city and to foster a sense of belonging for locals when implementing the framework.

It is also shown that rejuvenation efforts for alleys need to be approached as a network and planned accordingly, even if the alleys are developed in phases or by different stakeholders individually. With the installation of wayfinding and branding frameworks, the rejuvenated alleys will not feel fragmented or disjointed, but instead will be more recognised, visible, used, and perceived as safe and comfortable spaces to utilise through the cohesive visual and wayfinding elements in the alley networks.

RECOMMENDATIONS FOR FURTHER STUDY

While this research provides a foundation for revitalizing alleys in Kuala Lumpur, there are two key areas that deserve further exploration to ensure these strategies work long-term and in different places.

First, there is the question of scalability. Every city has its own unique "DNA," and what works in the heart of Kuala Lumpur might need to be adapted for the historic lanes of George Town or the busy industrial corridors of Jakarta. Future research should test this "Alley Cognizance" framework in other urban environments with different socio-cultural backgrounds. This would help determine if the way people perceive safety and navigation is a universal human response or if it's heavily shaped by local traditions and architecture.

Second, the economic factors behind these projects need closer look. Design ideas are essential, but the reality of implementation often comes down to funding. It would be valuable to explore how different financial models—whether they are city-led grants, private investments, or community crowdfunding—impact how the framework is actually put into practice. Understanding the link between a project's budget and its social success will help planners move from small-scale "art lanes" to sustainable, city-wide urban networks.

CONCLUSION

The key elements listed in Table 4 are essential for alley awareness—the public's ability to perceive, use, and feel safe within these spaces. When alleys are designed with clear form, pedestrian-friendly infrastructure, and cultural identity, they change from neglected back-ways into valued connectors and community areas. This change boosts perceived safety, promotes frequent use, and encourages local stewardship, creating positive cycles of community involvement and resilience.

Moreover, widespread negative perceptions of alleys often stem from a combination of factors, including anecdotal hearsay, harmful media portrayals, and isolated negative experiences that influence public opinion. These perceptions not only affect individual behaviour but also create systemic barriers that hinder investment in and use of these important urban areas (Ellis, 2022). Studies suggest that improving spatial understanding and implementing effective wayfinding strategies could significantly reduce these concerns and encourage a more positive interaction with alley environments.

Learning from existing successful revitalisation projects, Successful revitalization projects show that the best results come from a structured plan rather than random upgrades. Instead of treating alleys as isolated shortcuts, these initiatives integrate them into a larger urban network by focusing on safety, community involvement, and clear identity. By using tools like consistent branding, better navigation, and dedicated social spaces, these projects make the environment easier to understand. This "readability" reduces spatial anxiety and significantly boosts how safe and welcome people feel in the space.

ACKNOWLEDGEMENT

This research is supported by Universiti Sains Islam Malaysia (USIM) through the Geran Kumpulan Penyelidikan (KUP) USIM (PPPI/KUP/FKAB/USIM/14223).

This research was funded by the Ministry of Higher Education (MOHE) under the Fundamental Research Grant Scheme Early Career Researcher (FRGS-EC) with reference number **FRGS-EC/1/2024/SSI12/USIM/02/1**.

REFERENCES

- Arthur, P., & Passini, R. (2002). *Wayfinding: People, signs, and architecture*. McGraw-Hill.
- Askarizad, R., Heidari, A. A., & Khalili-Araghi, S. (2024). Configuration analysis of alleyways in Mediterranean cities and their impact on urban mobility. *Journal of Urban Planning and Development*, 150(1), 04023045. <https://doi.org/10.1061/JUPDDM.0000701>

- Borini, F. M., & Campioli, A. (2024). Community engagement in alley design: Evaluating urban micro-spaces for social sustainability. *Journal of Urbanism*, 17(2), 143–160. <https://doi.org/10.1080/17549175.2023.2259175>
- City of Bellingham. (2021). Reactivating Downtown Alleys. <https://cenv.wvu.edu/files/2022-11/2021%20ReActivating%20Downtown%20Alleys%20-%20City%20of%20Bellingham.pdf>
- City of Los Angeles, Department of City Planning. (2020). Urban Design Principles. <https://planning.lacity.gov/odocument/3198c428-4cba-49eb-8155-c302d12b177a/UrbanDesignPrinciples.pdf>
- Clarion Alley Mural Project. (2024). Retrieved from <https://clarionalleymuralproject.org>
- Crociati, J., & KoDA, M. (2020). The Space Between. University of Miami, School of Architecture. https://www.arc.miami.edu/assets/pdf/the-space-between_jake-crociati_koda.pdf
- Ellis, C. (2022). Urban infrastructure and the perception of neighbourhood. *Urban Studies Journal*. Retrieved from https://www.researchgate.net/publication/375281650_Urban_Infrastructure_and_the_Perception_of_Neighbourhood
- Global Designing Cities Initiative. (2024). Case study: Laneways of Melbourne, Australia. In *Global Street Design Guide*. Island Press. Retrieved from <https://globaldesigningcities.org/publication/global-street-design-guide/streets/pedestrian-priority-spaces/laneways-and-alleys/case-study-laneways-of-melbourne-australia/>
- HCMA Architecture + Design. (2024). Vancouver's Awesome Alleys: A five-year strategy. HCMA. Retrieved from <https://hcma.ca/wp-content/uploads/2024/07/Vancouver-Awesome-Alleys-Strategy-Report.pdf>
- Hölscher, C., Meilinger, T., Vrachliotis, G., Brosamle, M., & Knauff, M. (2013). Up the down staircase: Wayfinding strategies in multi-level buildings. *Journal of Environmental Psychology*, 33, 103–114. <https://doi.org/10.1016/j.jenvp.2012.10.002>
- Institute of Transportation Engineers. (2010). *Designing walkable urban thoroughfares: A context-sensitive approach* (Recommended Practice). ITE. <https://www.naturewithin.info/Roadside/ITE%20Walkable%20Urban%20Streets.pdf>
- Jung, S. J., Lee, M. K., & Kim, H. J. (2021). Strategies for alley regeneration in Seoul: Focusing on lighting and symbolic design elements. *International Journal of Urban Sciences*, 25(3), 457–474. <https://doi.org/10.1080/12265934.2020.1860519>
- Lynch, K. (1960). *The image of the city*. MIT Press.
- Montello, D. R. (2005). Navigation. In P. Shah & A. Miyake (Eds.), *The Cambridge handbook of visuospatial thinking* (pp. 257–294). Cambridge University Press.
- Nasar, J. L., & Jones, K. M. (1997). Landscapes of fear and stress. *Environment and Behavior*, 29(3), 291–323. <https://doi.org/10.1177/001391659702900301>
- Papaioannou, O., Papagiannakis, A., & Hatziprokopiou, P. A. (2020). Mental maps and representations of the city centre of Thessaloniki: Inhabitants' perceptions and

Wan 'Iffah Wan Ahmad Nizar, Nor Syahila Ab Rashid, Wan Norisma Wan Ismail, Nurul Syala Abdul Latip,
Noor Hayati Ismail, Azhani Abd. Manaf
INCREASING ALLEY COGNIZANCE TO IMPROVE COMMUNITY SAFETY IN KUALA LUMPUR: A
CRITICAL STUDY OF REVITALISED URBAN ALLEY

stereotypes of the urban landscape and daily mobility. *European Journal of
Geography*, 11(4), 22–35. <https://doi.org/10.48088/ejg.o.pap.11.4.22.35>

Received: 11th November 2025. Accepted: 13th January 2026