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Spatial Characteristics and Housing Patterns: A Case Study of the Informal Settlement in Coblong District, Bandung

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ABSTRACT

This study aims to identify and explain the characteristics of informal settlements in Coblong District, Bandung City, within the context of residential architecture and urban housing issues in densely populated urban areas. Informal settlements in this area have developed organically without formal planning as a response to limited land availability, rising property prices, and the limited capacity of low-income communities to access adequate housing. This research employs a descriptive qualitative approach through field observations and literature reviews to analyze the physical characteristics of the area, spatial organization, housing patterns, and the forms of spatial adaptation undertaken by residents. The findings reveal that the settlement exhibits a dense and organic spatial structure characterized by narrow circulation networks, closely spaced buildings, and flexible boundaries between public and private spaces. Furthermore, housing development occurs incrementally through both horizontal expansion and vertical additions, reflecting residents evolving needs and economic capabilities. Many dwellings also serve dual functions as living spaces and family-based business premises, demonstrating the community's adaptive strategies in maximizing the use of limited space. These findings indicate that informal settlements not only represent physical and economic constraints but also reflect the residents' capacity to create functional and contextually appropriate living environments. The study is expected to provide a foundation for developing inclusive, participatory, and sustainable strategies for

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informal settlement upgrading and to contribute to the formulation of urban housing policies in Indonesia.

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1. INTRODUCTION

This area exhibits the characteristics of a kampung-kota, with buildings in close proximity, narrow circulation routes, and limited open spaces. Although it may appear disorganized, this pattern actually reflects the way in which the community has adapted to limited space and economic constraints. Informal settlements in Indonesia are areas inhabited by urban communities without official permission, on land considered unfit for habitation (Obermayr, 2017; Suhartini & Jones, 2023). In other words, the formation of such an environment is the result of the creativity and adaptability of the community in response to urbanisation, rather than simply the consequence of disorderly urban planning.

The growth of the Coblong Dictrict also shows strong social and economic dynamics. Housing not only serves as place to live, but also as a space for business or household economic activities. In urban areas, people often develop their homes incrementally, both horizontally and vertically, to accommodate family needs and increase income (Access, 2020; Satrio & Sukmawati, 2021). This adaptive pattern illustrates the ability of communities to optimise space in the face of limited land and resources.

Social activities also play an important role in shaping the character of urban spaces. Public spaces in densely populated areas often emerge in transition zones such as house terraces or small alleys, which become places for residents to interact, engage in economic activities, and participate in communal activities (Indriani, 2017). These spaces blur the boundaries between public and private spaces, creating strong social bonds among the residents. A similar phenomenon can be observed in the Coblong district, where narrow lanes serve as both circulation routes and social spaces for the community.

In terms of appearance, the variety of shapes and materials of the buildings in this area reflect the social and economic identity of its inhabitants. The diversity of architecture in the city-villages is the result of the community's adaptability to environmental conditions and their respective economic capabilities (Winasavitri, Surjono, & Wijaya, 2023). Therefore, Coblong District is not just an informal settlement, but also a distinctive urban community, resulting in a form of urban life that grows from the bottom up, where space and society influence each other (Iqbal, 2021; Rabbaniyah & Program, 2026; Turner, 1976).

This study will examine the spatial characteristics and housing patterns of the community in the Coblong district to understand how adaptation, social interaction and the formation of the area occur. The results are expected to provide a more contextualised understanding of the city-village phenomenon and to inform the planning of dense urban areas.

1.1 Literature Review

Informal settlements in urban areas generally have the following physical characteristics: high building density, narrow circulation routes, and limited open spaces (Mottelson, 2020). Although it may appear disorganised, this spatial layout is actually the result of the community adapting to limited land, environmental conditions, and social and economic pressures (Nezhadmasoum & Vehbi, 2025). This evolving spatial pattern reflects the spatial logic born from daily settlement practices, rather than being solely the result of a lack of formal planning (Amalia & Ikaputra, 2024).

In urban areas, housing not only serves as a place to live, but also as a space for household economic activities. People tend to develop their homes incrementally, both horizontally and vertically, as a strategy to adapt to the needs of the family and increase economic capacity. This adaptive pattern demonstrates the community's ability to optimise space flexibly in the face of limited land and resources (Li et al., 2021).

Social activities play an important role in shaping the character of informal settlements. The limited availability of formal public spaces has led to the emergence of social spaces in

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transition areas such as house terraces and narrow alleys, which serve dual purposes as circulation routes and social interaction spaces (Fitria et al., 2022). This situation causes the distinction between public and private spaces to become increasingly blurred, strengthening social bonds between residents (Kamalipour, 2023).

The diversity of building shapes and materials in informal settlements reflects the social and economic backgrounds of their inhabitants and shapes the visual identity of the area. This architectural variation is the result of individual and collective adaptation to environmental conditions and the economic capacity of each household. Thus, villages can be understood as forms of settlement that grow from the bottom up, where space and society are formed through ongoing adaptation (Nezhadmasoum & Vehbi, 2025).

2. RESEARCH METHODS

This study employs a descriptive qualitative approach through two main methods, namely direct observation and literature review, to identify the spatial characteristics of informal settlements in the Tamansari area of Bandung.

2.1 Direct Observation

This method was conducted through direct field observations to obtain empirical data regarding the physical and spatial conditions of the study area, including:

1) Building mass arrangement;
2) Spatial density and patterns;
3) Distribution of spatial functions.

2.2 Literature Riview

This stage was conducted by reviewing various references, including journal articles and previous studies related to informal settlements, urban morphology, and spatial patterns in high-density areas. The literature review was used to establish the theoretical framework and support the analysis of spatial characteristics and housing patterns within the study area.

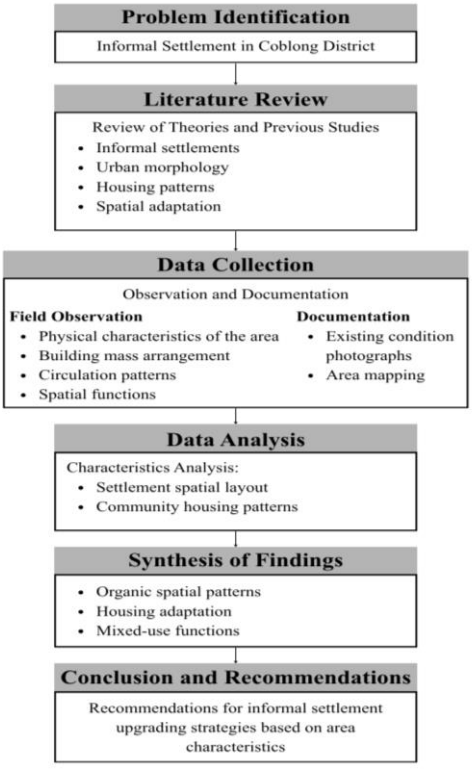

Figure 1. Research Methodology and Research Process Diagram
(Source: Author, 2026)

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3. RESULTS AND DISCUSSION

3.1 Context of the Coblong District

The Coblong district is an informal settlement located in the centre of Bandung city that has developed without formal planning. Based on field observations conducted twice during the day in one residential block, the area exhibits a high density of buildings due to limited land availability. The proximity of the location to the city centre has led to the organic growth of the settlement in response to the need for housing for low-income earners (Bawole et al., n.d.).

Figure 2. Coblong District, Bandung
(Source: Google Maps, 2025)

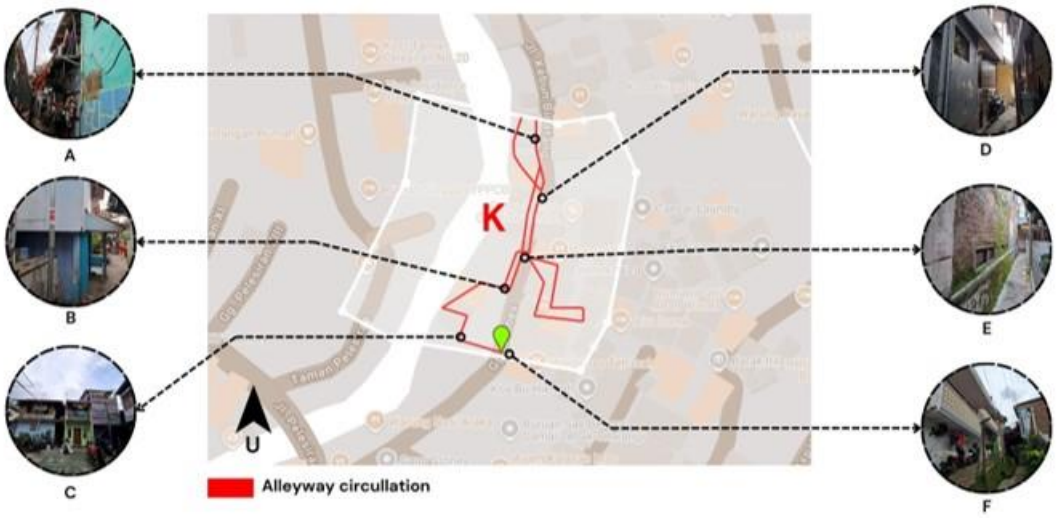

Figure 3. Keyplan of study area
(Source: Survey results, 2025)

The area is dominated by closely packed residential buildings, with minimal open space and narrow access roads. The physical condition of the settlement can be seen in **Figure 3**, which shows the very close proximity of the buildings and the lack of a hierarchy of roads as the main access.

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Figure 4. The condition of the Stones Alley in the Coblong District of Bandung.
(Source: Survey results, 2025)

This is illustrated in Figure 4, which shows the alleyway as the main access route to the area. It can be seen that the width of the alleyway is very limited and can only be passed by pedestrians, with very close distances between the buildings on the right and left sides. This results in minimal natural lighting and ventilation, creating a sense of a confined and enclosed space. The area not only functions as a circulation route, but also as a space for daily activities, so there is a potential for space conflicts and a reduction in the quality of the living environment.

3.2 Spatial Characteristics of Informal Settlements

The spatial characteristics of the settlement in Coblong District were formed through a bottom-up spatial growth process (developed based on community initiatives) that follows the daily needs and activities of residents (Dovey, 2015; Rabbaniyah & Program, 2026). The building arrangement does not follow a formal grid or block pattern; instead, it develops spontaneously with varied orientations. Narrow alleyways function as the main circulation elements connecting residential units within the settlement.

Figure 5. Residents' Activities Taking Place in the Alleyway
(Source: Survey results, 2025)

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Based on field observations, the width of the alleys in this area is very limited, and in some locations, they can only be passed by one person at a time. This condition causes the alleys to function not only as circulation paths but also as spaces for social activities. The transformation of alleys into children's play areas and spaces for community interaction occurs due to the limited size of residential spaces, particularly the small front terraces of houses. This phenomenon indicates an overlap between public and private spaces that emerges informally. This condition can be observed in **Figure 5**, which illustrates residents' activities taking place within the alley areas. Furthermore, the absence of formal communal spaces encourages residents to utilize transitional spaces as shared spaces. The spatial arrangement of the settlement is shaped not only by physical elements but also by patterns of space utilization that develop through the community's social practices.

3.3 Community Housing Patterns

Housing patterns in the settlements of Coblong Sub-district show incremental spatial development, both horizontally and vertically. Land constraints and limited financial resources tend to encourage residents to add storeys to their buildings as a form of 'growing homes' (Marinovic, 2021; Rabbaniyah & Program, 2026; Van Noorloos, F., Cirolia, L. R., Friendly, A., Jukur & Schramm, S., Steel, G., & Valenzuela, 2020; Wakely, P., & Riley, 2011). This growth has resulted in a variety of building heights and a dense, layered layout.

The findings of the observation also show that the majority of dwellings serve a dual purpose, with homes being used not only as residences but also as business premises, particularly small shops. These business activities are generally situated at the front of the house, meaning that the veranda or living room is repurposed as a commercial area. This situation blurs the boundary between private and public spaces and increases the intensity of activity in the front of the house and along the circulation routes. An example of the use of a residence as a business space can be seen in Figure 6.

Figure 6. The Use of Residential Properties as Business Premises
(Sumber: Author, 2025)

This compact and multifunctional housing model reflects the community's strategy for adapting to spatial constraints, housing trends and economic needs. Housing is understood not only as a domestic space, but also as part of the area's social and economic system.

3.4 Synthesis of Finding

Based on the results of field observations, it can be concluded that the spatial characteristics and housing patterns in the Coblong District settlement are interconnected and formed through an adaptation process to land limitations, high-density conditions, and the socio-economic needs of the community. The dense and irregular spatial layout encourages the emergence of flexible housing patterns, where private, public, and

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commercial spaces overlap with one another. This phenomenon indicates that informal settlement spaces cannot be understood solely from their physical aspects, but also through the activity patterns and spatial uses that develop organically within the community.

4. CONCLUSION

Based on field observations and analysis of the spatial characteristics and housing patterns in the informal settlement of Coblong District, it can be concluded that the spatial structure and housing development in this area have been shaped through a process of community adaptation to limited land availability and living space needs. The organic growth of the settlement has produced a dense and irregular settlement pattern, characterized by closely packed buildings and narrow alleyways as the primary means of access. This condition results in a scarcity of open space and formal communal areas, causing social and domestic activities to spill into exterior spaces such as porches and alleyways.

The housing patterns reflect incremental spatial development, both horizontal and vertical, as a strategy to expand dwelling functions in response to land constraints. Furthermore, most houses serve dual functions (mixed-use), particularly as small household-based shops, which blur the boundary between private and commercial spaces and increase the intensity of activities along circulation routes. This phenomenon demonstrates an overlap between private and public spatial functions as a form of adaptation to residents' economic and social needs.

The main issues identified include limited communal space, the conversion of alleyways that disrupt movement, poor natural lighting and ventilation quality, and pressure on front of house space due to commercial activities.

Based on these findings, several recommendations are proposed to address the identified spatial and environmental challenges while preserving the social and economic characteristics of the settlement. These recommendations focus on improving living conditions, enhancing spatial quality, and supporting sustainable community development within the area:

1. **Community based incremental upgrading**
   Spatial improvement strategies should be implemented gradually and participatorily without displacing the existing social character of the settlement. Community involvement in the planning process is essential to ensure that interventions are contextually appropriate and sustainable.
2. **Provision of small scale communal spaces**
   Given the absence of formal communal areas, the creation of pocket open spaces or shared activity nodes at strategic points within the settlement is recommended. These spaces can serve as social, recreational, and economic interaction areas for residents.
3. **Circulation and alleyway restructuring**
   The dual function of alleyways as both circulation routes and social spaces requires careful management. Widening selected alleyways and establishing clear zoning between movement corridors and activity zones can reduce spatial conflict without eliminating the social vitality of these spaces.
4. **Regulation and facilitation of mixed use functions**
   Rather than prohibiting home based economic activities, policies should facilitate and organize them through spatial design guidelines that ensure commercial functions do not compromise the quality of residential environments or obstruct circulation.

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5. **Improvement of building quality and environmental health**
   Incremental upgrading of building structures, natural ventilation, and lighting quality should be prioritized, particularly for dwellings that are most deficient in these aspects. Technical assistance programs and community based micro financing can support this process.
6. **Integration into urban housing policy**
   The adaptive strategies developed organically by residents of Coblong District offer valuable insights for the formulation of inclusive and participatory urban housing policies in Indonesia. Recognizing the inherent spatial logic of informal settlements rather than treating them solely as planning failures can lead to more effective and humane upgrading approaches.

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