SPECULATIVE SETTLEMENTS:  
BUILT FORM/TENURE AMBIGUITY IN KAMPUNG DEVELOPMENT

Wiryono Raharjo

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Melbourne School of Design
Faculty of Architecture, Building and Planning
The University of Melbourne
ABSTRACT

Over one billion people in the world today live in slums. This UN estimation suggests that slums continue to be part of the global production of the built environment, regardless of the countless efforts to eradicate them. Slums, squatters’ settlements, and informal settlements are words frequently used interchangeably to describe a ‘non-state’ approach to settlements development, which characterises the contemporary urban Third World. The urban kampung (informal settlement) of Indonesia exemplify such phenomenon.

This thesis investigates kampung development with particular reference to kampung in the city of Yogyakarta. An underlying premise of this thesis is that, in terms of the tenure acquisition process, informal settlement development is the reverse of traditional (formal) development. In formal development, secure tenure precedes the building construction, through the granting of authorised property title by the state. By contrast, in informal development, building construction comes first and tenure negotiation follows. A primary proposition of the thesis is that tenure acquisition in this mode of development is a speculative endeavour, through which the buildings (built forms) function as mediators of tenure negotiation. The thesis argues that the continuity and change of built forms can signify tenure security/insecurity of kampung dwellers. To satisfy this claim, the research employs a case study approach with two case studies selected: kampung Sidomulyo/Kricak and kampung Tungkak.

Kampung Sidomulyo/Kricak emerged as a result of private land subdivision by the landlords, who saw the demolition of a homeless barrack and eviction of its dwellers as a prospect for property speculation. These landlords speculated by leasing their lands to renters who built their own houses, using temporary building structures. The result in such parts of the kampung was not squatter housing but insecure tenure in rented slums. The need for a higher sense of permanence later drove these renters to invade the government-controlled lands along the riverbanks. Such invasions not only expanded the territories of this kampung, but also provided some renters with access to finance to acquire of the authorised rented lands, in
order to gain a greater tenure security. In this case the squatters’ settlement has enabled higher quality housing and greater tenure security than the rented slums.

Similarly, the development of kampung Tungkak began with coercive displacement of the homeless housing tenants, through the abandonment of such a facility by the government. However, since these buildings were not demolished, they provided an opportunity for the existing tenants to remain or to move out, and for outsiders to reterritorialize the vacant abandoned buildings (as well as to claim the vacant lands around them). Moreover, tenure conditions in Tungkak are highly ambiguous as the land largely belongs to the Sultan of Yogyakarta; the abandoned buildings belong to the local government, and the construction within and around them mostly belong to the residents. The research finds such ambiguity provides prospects for the continuity of property speculation and the attainment of de facto tenure.

Analyses of both case studies were conducted primarily by means of morphological mapping and interview. The dimension of analysis includes history, tenure conditions, morphology, utilities and services, everyday life, and current changes and upgrading. It is argued that secure tenure in kampung development is gained through a range of tactics, many of which involve built form at the scale of both the house and the neighbourhood (Rukun Tetangga - RT). The house can be seen as a built form that functions as the starter of tenure acquisition, where the materiality of the house functions as a signifier of permanence. At a collective level, public buildings, pavements, and gates work to legitimate and stabilize the settlement as a whole. The latter could signify the greater confidence of dwellers in dealing with the threat of tenure insecurity. The research also argues that kampung development tends to be community-driven. Within this pattern, the state involvement tends to be subordinate. The quest for secure tenure involves a range of complex speculative activities that utilise informal tactics as they seek the formalities of permanent tenure.
DECLARATION

This is to certify that this thesis comprises only my original work towards the PhD except where due acknowledgement has been made in the text to all material used. The thesis is less than 100,000 words in length, exclusive of tables, maps, references, and appendix.

Wiryono Raharjo
December 2010
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# GLOSSARY

## A
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- **Arisan**
- **ATPS (Akademi Teknologi Penilik Sosial)**
- **Aza**

## B
- **Bappeda (Badan Perencanaan Pembangunan Daerah)**
- **Bappenas (Badan Perencanaan Pembangunan Nasional)**
- **BPN (Badan Pertanahan Nasional)**

## C
- **Camat**
- **Cangkok (Javanese)**
- **CAP**

## D
- **DPR (Dewan Perwakilan Rakyat)**

## G
- **Goli (Gabungan anak liar)**
- **Gapura**
- **Gardu**
- **Gedhek (Javanese)**
- **Gedhong (Javanese)**

- Armed Forces of the Republic of Indonesia
- Community rotating saving
- Technical Academy of Social Advisor
- A short name for azazyookai - neighbourhood association during the Japanese occupation (today’s Rukun Warga – RW)
- Regional (or Municipal) Agency of Planning and Development
- National Agency of Planning and Development
- National Land Agency
- District (kecamatan) head
- Landlord
- Community Action Planning
- People’s Representative Assembly
- An informal term denoting ‘gangster’ (often called *preman* in other parts of Indonesia)
- Entry gate of a settlement (neighbourhood, town, city, regency)
- Security post
- Bamboo partition
- Permanent (brick and concrete) partition
• Golkar

• GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit)

• Golongan Karya (name of a political party)

• German Technical Cooperation Agency

H

• Hak Guna Bangunan
• Hak Milik
• Hak Pakai
• Hak Sewa

• Right of Building
• Right of Ownership
• Right of Use
• Right of Lease

J

• Jimpitan

• Rice (or coins) to be collected by the night patrollers

K

• Kampung

• Urban informal settlement (general definition)

• District

• Sub-district

• Kotangan (Javanese)

• Half brick - half bamboo construction

• KTP (Kartu Tanda Penduduk)

• Resident’s ID Card

M

• Magersari (Javanese)

• Agreement under customary (adat) law to use the Sultan land

• MCK (Mandi Cuci Kakus)

• Bath Laundry Toilet (a widely used term for public bathrooms/toilets)

• MDG

• Millennium Development Goals

• Musholla

• Small room for praying (Muslim)

N

• Ngindung (Javanese)

• Agreement under customary (adat) law to lease the land of the commoners for the purpose of dwelling

• NGO

• Non Governmental Organisation

• NUSSP

• Neighbourhood Urban Shelter Sector Project
<table>
<thead>
<tr>
<th>O</th>
<th>OPK (Operasi Pemberantasan Kejahatan)</th>
<th>• Operation of Crime Eradication</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>PBB (Pajak Bumi dan Bangunan)</td>
<td>• Land and Building Tax</td>
</tr>
<tr>
<td></td>
<td>PDAM (Perusahaan Daerah Air Minum)</td>
<td>• Municipal Drinking Water Company</td>
</tr>
<tr>
<td></td>
<td>PDI (Partai Demokrasi Indonesia)</td>
<td>• Indonesian Democratic Party</td>
</tr>
<tr>
<td></td>
<td>PEKAT (PENyakit masyarakat)</td>
<td>• Community social disease</td>
</tr>
<tr>
<td></td>
<td>Pemda (Pemerintah Daerah)</td>
<td>• Local Government</td>
</tr>
<tr>
<td></td>
<td>Pengindung (Javanese)</td>
<td>• Land renter under ngindung scheme</td>
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<td></td>
<td>Petrus (PEnembak misTeRiUS)</td>
<td>• Mysterious sniper</td>
</tr>
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<td></td>
<td>PLN (Perusahaan Listrik Negara)</td>
<td>• State Electricity Company</td>
</tr>
<tr>
<td></td>
<td>P2KP (Program Pengentasan Kemiskinan Perkotaan)</td>
<td>• Urban Poverty Alleviation Program</td>
</tr>
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<td></td>
<td>PKI (Partai Komunis Indonesia)</td>
<td>• Communist Party of Indonesia</td>
</tr>
<tr>
<td></td>
<td>PPP (Partai Persatuan Pembangunan)</td>
<td>• Unity of Development Party</td>
</tr>
<tr>
<td></td>
<td>Prokasih (Program Kali Bersih)</td>
<td>• Clean River Program</td>
</tr>
<tr>
<td>R</td>
<td>Rijksblad (Dutch)</td>
<td>• Royal gazette</td>
</tr>
<tr>
<td></td>
<td>Ronda</td>
<td>• Night patrolling</td>
</tr>
<tr>
<td></td>
<td>RK (Rukun Kampung)</td>
<td>• Literally translated as Kampung Harmony (but the actual meaning is RT association)</td>
</tr>
<tr>
<td></td>
<td>RT (Rukun Tetangga)</td>
<td>• Literally translated as Neighbourhood Harmony (but the actual meaning is Household Association)</td>
</tr>
<tr>
<td></td>
<td>RW (Rukun Warga)</td>
<td>• Literally translated as Residents Harmony (but the actual meaning is RT association – a replacement of RK in the 1980s)</td>
</tr>
<tr>
<td>S</td>
<td>Siskamling (Sistem keamanan lingkungan)</td>
<td>• Neighbourhood security system</td>
</tr>
<tr>
<td></td>
<td>Staatsblad (Dutch)</td>
<td>• State gazette</td>
</tr>
</tbody>
</table>
T
- Tali asih
- TPA (Taman Pendidikan Al Qur’an)

- Tonarigumi

U
- UUPA (Undang Undang Pokok Agraria)
- UPC

- BAL (Basic Agrarian Law)
- Urban Poor Consortium

W
- Waria
- Wong mburi (Javanese)
- Wong ngarep (Javanese)

- Transgender
- Back people
- Front people

Y
- YPR (Yayasan Pondok Rakyat)

- People’s Shelter Foundation
INTRODUCTION

In the mid 1980s, when I was an undergraduate architecture student at Gadjah Mada University, I had the chance to work with the late Father Mangunwijaya, a prominent Indonesian architect and writer. It was not my responsibility as an architect’s assistant that sparked my interest in informal urbanism, as my main duty did not relate to such field. Instead it was Father Mangun’s¹ philanthropic activity in kampung Gondolayu, where he devoted much of his spare time to advocate for the nearly evicted slum dwellers through his architectural and rhetorical talents.

There is no clear historical record on the emergence of kampung Gondolayu, but as a native of Yogyakarta, I have witnessed its growth since the 1970s, when this kampung appeared as a dilapidated squatters’ settlement lining Codé River. The settlement comprised largely of makeshift shelters, inhabited by informal workers. They claimed the government land and gradually developed these shelters that co-existed with an informal rubbish-dumping site. In the early 1980s, the arrival of Father Mangun accompanied by a group of dedicated interdisciplinary students, gradually improved the social and physical conditions of the settlement. However, the local government did not welcome such effort at the time. For the government, this squatters’ settlement needed to be cleared, since it had turned a prime urban land into a blighted environment.

The threat of eviction was a formal part of the government plan. Father Mangun negotiated the cancellation of the eviction plan, while continuing his concerted effort to improve the settlement. As a result, this highly visible settlement became a work of art (Figure 0.1), and became a public spectacle that continues until today. While such a physical transformation was not the only consideration for the government in cancelling the eviction plan, the improved environment did significantly contribute to dwellers’ tenure negotiation facilitated by Father Mangun. Notwithstanding the unauthorised land status, a few years later the government formally recognised the existence of this settlement by granting a

¹ ‘Father Mangun’ is a short name of Father Mangunwijaya.
neighbourhood administrative title known as RT\(^2\). A global recognition came as well in the early 1990s, through the granting of the Aga Khan Award in Architecture (Khudori, 2002).

![Image of Gondolayu neighborhood](http://www.archnet.org/library/sites/one-site.jsp?site_id=999, accessed on 15 July 2009)

**Figure 0.1** Kampung Gondolayu: transforming a slum to urban art (source: [http://www.archnet.org/library/sites/one-site.jsp?site_id=999](http://www.archnet.org/library/sites/one-site.jsp?site_id=999), accessed on 15 July 2009)

This thesis is not about *kampung* Gondolayu, but the story of Gondolayu embodies the proposition of this thesis, which argues that in informal settlement development tenure is gained gradually through unauthorised territorial claims, largely by means of the production of the built form. This research sees informal housing development as a reverse of formal (traditional) development in terms of tenure attainment. While formal housing development assures security of tenure prior to its commencement, in informal housing development construction as a means of property occupation takes place first then tenure negotiation follows. ‘Informal’ thus means the absence or lack of state control over tenure, planning, and construction. This situation leads to what might be termed ‘tenure ambiguity’, a position where

\(^2\) RT stands for *Rukun Tetangga* (‘Household Association’).
the legitimacy of occupation is ambiguous. In this regard, housing design and construction can be construed as speculative activities. Residents are speculating on the risk of displacement, either through eviction or environmental disaster, which may lead to the loss of their investment. However, tenure ambiguity can also be seen as an opportunity to maintain a dwellers’ existence on the claimed territory.

Speculation in this thesis is seen as a concept that looks at both informal markets of speculative activity and at the role of the ‘spectacle’ – the images or forms produced as part of the process. Therefore, speculation is not simply a form of investment but a kind of form-making activity, which suggests the need to better understand the morphology of built forms. The term ‘speculative settlements’ in the title of this thesis indicates the connection of the economic processes to formal outcomes and visual imagery. The term also suggests that speculative investment by the informal settlers might lead to the attainment of greater tenure.

The UN defines security of tenure as a right granted by the state to the citizens to protect them against forced eviction (Augustinus, 2003b). This definition suggests that the state is the primary agency responsible for providing access to tenure security. One may assume that such access means the provision of legalised tenure. While this assumption is not false, the continuing existence of informal settlements indicates that these settlements have achieved a certain extent of non-legalised tenure, often called ‘perceived’ or ‘de facto’ security of tenure (Augustinus, 2003a; Payne, 1997). Such a form of tenure usually occurs as a result of state intervention in the appropriation of the built forms. Some examples of the conditions that yield the perceived security of tenure include the government’s assisted installation of basic services such as electricity and water supplies, construction of community or religious buildings, and other assistances by both non-government and government-linked organisations (Davis, 2006).

Tenure is an abstract element, embodied in an individual who has the right to have control over a property. While the formal system acknowledges such control through certification, in informal settlements the quasi-right of housing held by dwellers is expressed through the production of built forms, from the staking out of territorial markers to the construction of the whole built environment. For example, squatters in Peru organised themselves to plan for land invasion, often carried out over one night. On the agreed day of the
invasion, these people arrived at the site *en-masse*, demarcated the plot using chalk powder, and subsequently erected shelters using makeshift building materials to proclaim their occupation of the lands (De Soto, 1989). Similarly land invaders in one of my case studies laid out the foundations to mark the claimed plots, and later erected a half-finished building to attract buyers. In semiotic terms, we may regard these built forms as tenure signifiers.

However, as Saunders (1990) reminds us, tenure is not a single circumstance. When one claims that he or she owns a house, such a claim involves a whole range of consequences, from paying the property tax to carrying out maintenance and improvement, which include the production of built forms and the establishment of social network. Such responsibility occurs not only within the formal housing world but also in informal settlements. In other words, tenure claims are enmeshed in an urban assemblage of built forms, practices, and meanings.

This thesis is an investigation of the morphology of informal settlements and an interrogation of the ways in which the morphology and the practices of its production are implicated in the ambiguities of tenure.

**Research Questions**

My intention to understand the nexus between the built form and tenure leads to a series of research questions, which comprise of a main question that breaks down to several sub-questions. The main question is ‘How do continuity and changes of the built environment mediate the process of tenure attainment in *kampung* development?’ And the sub questions are:

a. What are the ranges of formal tenure types within informal settlements? What are the relationships between different types of tenure within the same settlement and how do these relations affect the quest for secure tenure? What are the ambiguities and hybridities of tenure and what is the role of informal tenure?

b. What aspects of the built environment can be implicated in the processes through which informal settlements can achieve formal tenure? How do the form, construction and materiality of a house impact on tenure transformation, if at all? How do the settlement layout, visibility and image impact on tenure transformation, if at all? How do the
constructions, forms and functions of public buildings and open spaces impact on the achievement of tenure, if at all? How does access to private water and power supplies mediate the achievement of tenure, if at all?
c. What are the relationships between perceived permanence of built form and perceived continuity of tenure? What is the role of continuity in the achievement of tenure? To what degree does the non-demolition of an illegal house serve to symbolise ongoing tenure?
d. How does the role of the state in constructing of funding buildings, open spaces and other structures impact on the transition to secure tenure? How does the role of community and NGOs in constructing or funding building and open spaces affect tenure?
e. What aspects of decision-making are influential in the quest for tenure? Which kinds of speculative activity are most and least successful?

These and the clusters of related questions have guided the research methods and analyses of the thesis.

**Research significance**

In recent years studies on global urbanisation suggest that the consequences of this increasingly urbanised world can be seen through the rapid proliferation of informal settlements, particularly in the Third World. Informal settlement exists in all cities in Indonesia and elsewhere in developing countries. While eviction is not uncommon, the striking growth of urban slums as documented by the UN (Jacobson, 2007) demonstrates the continuing global tolerance, since formal urban planning has failed to address the rapid pace of informal urbanism. Alsayyad (2004) contends that the global urban future does not rely on the First World cities, but instead rests on the Third World cities like Bombay, Rio de Janeiro, Istanbul, and Cairo. Moreover, Huchzermeyer and Karam (2006) find that part of the reasons why informal settlements perpetuate, is lack of understanding of the complex ‘cause-and-effect’ relationship within the development process. Meanwhile, economist cum sociologist Altvater (2005) argues that informalisation is the third megatrend after urbanisation and globalisation. Studies on informal settlements, therefore, continue to be relevant today and in the future.
However, while the vast literatures on urban informality tend to address issues related to anthropology, land, property, and poverty (for example De Soto, 1989 and 2000; Guinness, 1986; Jellinek, 1991; Payne, 1999; and Perlman, 1969 and 2004), the large number of studies on settlement’s morphology tend to emphasise how culture and behaviour shapes the built environment (for example Caniggia and Maffei, 2001; Funo, 2002 and 2005; and Rapoport, 1977). The nexus between security of tenure and the built environment in informal settlement is understudied. In South East Asian cities, this lack of study links to the scarcity of primary information on urban land tenure, as Evers and Korff (2000:169) write:

There is certainly no lack of studies on urbanization and urban life in developing countries. Many aspects have been discussed, but one is curiously missing: urban land-ownership. A perusal of readers and summary of works quickly shows that urban land tenure is not among the often discussed topics. Terry McGee’s standard text on the South East Asian city, so far the only comprehensive study on South East Asian urbanism, excludes urban land tenure despite some occasional references to land speculation.

Within the Indonesian context, Tania Li’s (2007) *The Will to Improve* presents an apt example of how the improvement programs in this archipelago has displaced people from their places of origin, which certainly involve land tenure issues. However, Li’s work was focussed on the resettlement programs in the highland of Central Sulawesi. It neither discusses urban informal settlements nor urban land tenure, and it predominantly focuses on the ethnographic study of villagers and their conflicts related to agricultural lands in Sulawesi. Similarly, Anna Tsing’s (2004) *Friction* deals with the destruction of the forest environment by the transnational companies, which disturbed the livelihood of the indigenous people. While part of her work deals with the land tenure issues, it focuses on customary land tenure of the indigenous people, and does not discuss informal settlements and urban land tenure.

Attempts to study informal settlements through morphological mappings by means of remote sensing technology have been carried by several geographers (Abbott and Douglas, 2003; Jain, 2007; Stasolla and Gamba, 2008), but again they do not go beyond the description of morphological changes. Instead they are focussed more on technological and morphological issues than on how tenure operates.
The urgency to pay attention to the issues of secure tenure for the urban poor has been increasing over recent years, particularly after the setting of MDG (Millennium Development Goals). This issue has been promoted through the UN-led global campaign for security of tenure, to respond to the goal of improving the life of 100 million slum dwellers by 2020 (UN Habitat, 2004; Huchzermeyer, 2006). In response to the above gaps, this research offers an avenue for understanding the trajectory of tenure attainment in informal settlements through a longitudinal examination of settlement morphology. The continuity and change of the built forms can be seen as a means to understand the dynamic of tenure and the perpetual existence of informal settlements. This leads to the proposition that the production of built forms in kampung development is a political means for the kampung dwellers to negotiate with the state for secure tenure. In other words, the production of illegitimate built form can become a means to legitimacy.

Aim and scope
As implied in the preceding sections, the aim of this research is to better understand the nexus between built form and tenure attainment in kampung development. To satisfy such an aim, this research takes a case study approach, with two case studies selected: kampung Sidomulyo/Kricak and kampung Tungkak. Both of these kampung are located in the city of Yogyakarta, Indonesia.

Kampung Sidomulyo represents a conventional informal settlement, which emerges as a result of incremental and loosely organised land invasion and unauthorised development initially on private (authorised) lands, subsequently extending to public (unauthorised) lands. Kampung Tungkak is a less conventional informal settlement initiated through unauthorised subdivision of the interior space of an abandoned state institution, and later extending to other forms of public land.

This research intends to understand the micro-spatiality of both kampung Sidomulyo/Kricak and kampung Tungkak. While some methods are borrowed from morphological analysis as understood in the West, it involves an approach to informal settlements that has rarely been applied in this way. The scope of the study is thus limited to
such micro-spatiality and does not include the larger scale questions of transnational development and political economy. This does not mean that such larger scale questions are irrelevant to this study, but I want to emphasize that there are now many examples of top-down attempts of dealing with squatter settlements and slums that occur through a lack of understanding of the micro-scale particularities and contingencies of informal urbanism. It is somewhat sceptical of the notion that the development process might fall into place once we better understand the macro-scale conditions.

This research covers the settlements history and residents’ tenure conditions. Historical analysis looks at the longitudinal development of each kampung, from its establishment until 2008. The analysis focuses on the continuity and change of the social fabric and the built environment. Triangulation of interviews, archival studies, and ground mappings is the main strategy used in conducting such historical analysis. The same strategy is applied in tenure analysis, which specifically looks at the tenure status of the households, morphology, utilities and services, everyday life, and current changes of the built environment.

**Structure of the dissertation**

The dissertation consists of six chapters. Chapter 1 is aimed at reviewing the current state of research on informal settlements. It first builds on the operational definition of informal settlement, by reviewing the slippage in the use of the terms ‘slum’, ‘squatters’, and ‘informal settlement’ in the discourses on urban informality. Second, it examines the forms of speculation that link to the attainment of tenure. In this context, speculation is seen as the way in which residents deal with various risks, including displacement. Global cases of development are examined, in addition to the way informal settlement is studied morphologically.

Chapter 2 focuses on urban informality within Indonesia in general and Yogyakarta in particular. First, it reviews the geography and governance of the city, followed by an account of kampung, which examines the previous research in order to describe the meaning of kampung. The chapter then turns to look at the neighbourhood governance system, the Rukun Tetangga (RT - Households Association) and Rukun Warga (RW - Neighbourhood Association), and how these institutionalised yet informal governance systems have characterised the urban social
system and shaped the built environment of the urban settlements. Furthermore, this chapter reviews the land tenure issues in Indonesia and Yogyakarta in particular, including the co-existence of *adat* (customary) land tenure with the state controlled tenure under the Basic Agrarian Law (BAL).

Chapter 3 describes the methodology employed for this research, which comprises two parts. The first part describes the theoretical framework, which includes reviews of relevant urban social theories such as Habraken’s (2000) *environmental game model*, Gidden’s (1990) concept of *ontological security*, and DeLanda’s (2006) *assemblage theory*. These social theories become a toolbox for data analysis.

The second part of Chapter 3 describes how data was collected. Data was collected through four methods: archival study, morphological mapping, interviewing the key informants, and visual (photographic and video) recording. Analysis of the data collected was primarily conducted by superimposing the layers of information onto morphological maps, to see how such a multiplicity of information explains the built form/tenure nexus. The area of analysis includes history of *kampung* development, household’s tenure condition, morphology of the built environment, utilities and services, everyday life of the residents, and current physical transformation of the built environment.

Chapters 4 and 5 discuss the selected case studies. Chapter 4 reviews the fieldwork findings of *kampung* Sidomulyo/Kricak, while Chapter 5 looks at the fieldwork findings of *kampung* Tungkak. Both chapters are structured in the same manner. They begin with the historical analysis of the settlements formation, from early establishment until 2008 then are followed by morphological analysis of tenure dynamics.

Lastly, Chapter 6 synthesises the whole research endeavour. It links the analytical toolbox with the fieldwork data analysis in order to describe the lessons-learnt from the examination of the two selected case studies. These lessons-learnt are the embodiment of responses to the research questions formulated earlier in this Introduction.
CHAPTER 1

INFORMAL SETTLEMENTS

An alarming rate of growth in the population of global slum dwellers has prompted a vast and growing number of studies on informal settlements. This chapter is aimed at examining what is the current state of research on informal settlements. It consists of six sections. The first section ‘interrogates’ the definition of informal settlement by examining the frequently interchanged terms of ‘slum’, ‘squatter’, and ‘informal settlement’. The second section explores how informal development emerges, followed in section three by discussions on types of the built environment resulting from such development.

The notion of secure tenure is reviewed in section four, while transformation through appropriations of the built environment is discussed in section five. Furthermore, section six explores the current state of research concerning informal settlements that incorporates urban morphology, which studies the structure of built environment at various scales.

1.1. Slum, squatter, and informal settlements: interrogating the definitions

The number of global slum dwellers, as UN-Habitat (2003) reminds us, has exceeded one billion today. The term ‘slum’ in such a claim denotes both ‘squatter’ and ‘informal settlement’, suggesting the practice of interchanging these three terms continues, despite the fact that this leads to the biased understanding of these aforementioned terms. This section responds to the questions of what are the differences between each of these terms, and why do these terms tend to be freely interchanged in discourses of urban informality.

The word ‘slum’ is broadly understood as a settlement that suffers various lacks: lack of adequate space for decent living (overcrowding), lack of infrastructure services and lack of construction safety (UN Habitat, 2003). Punty (cited in Davis, 2006:21) notes, the early usage of the word ‘slum’ can be traced back to the 19th century, during which time the word was first introduced in Ireland. The word appeared in the work of James Hardy Vaux (published in 1812), in which a slum is described as “criminal trade”. Here we see a legal dimension within such
terminology, but the spatial dimension is not emphasized. However, in Alan Mayne’s accounts on 19th century England, it is described that ‘Charity workers, sanitarians, housing reformers, and urban planners all identified slum as spatial and social abominations’ (Mayne, 1993:1). The term ‘slum’ thus describes an assemblage of spatial/social domains, which intersect the legality/illegality domains.

On legality/illegality domains, recent work by Mike Davis (2006) suggests that the slum encompasses a broad range of formal and informal tenures. As suggested in Table 1.1, a slum represents a various quality of settlements, regardless of their tenure conditions. UN-Habitat (2003) suggests that the slum emerges as a result of poverty coupled with a lack of affordable housing, while poverty stems from a combination of ‘income inequality, lack of economic growth, and in-migration’ (UN-Habitat, 2003:18). But Mayne (1993:1-2) asserts, ‘Slums are myths. They are constructions of the imagination’ by the ‘dominant bourgeois culture’. A similar claim occurs in Janice Perlman’s (1976) work of Rio favelas (squatter’s settlement). Her findings suggest that the general public - and most importantly the state officials - tend to see favela as ‘pathological agglomerations’. They see the favela as ‘a disorderly agglomeration of unemployed loafers, abandoned women and children, thieves, drunks, and prostitutes’ living in areas without basic infrastructure services. Such a bad representation of favelas prompts ‘the prevailing myth on the subject’ (Perlman, 1976:14-15).

### Table 1.1 Typology of Slum (source: Davis, 2003:30).

<table>
<thead>
<tr>
<th>Location</th>
<th>Tenure category</th>
<th>Settlement type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro Core</td>
<td>Formal</td>
<td>Tenements: (1) hand-me-down; (2) built for poor</td>
</tr>
<tr>
<td></td>
<td>Public housing</td>
<td>Hostel</td>
</tr>
<tr>
<td></td>
<td>Informal</td>
<td>Squatters: (1) authorized; (2) unauthorized</td>
</tr>
<tr>
<td></td>
<td>Pavement dwellers</td>
<td></td>
</tr>
<tr>
<td>Periphery</td>
<td>Formal</td>
<td>Private rental</td>
</tr>
<tr>
<td></td>
<td>Public housing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informal</td>
<td>Pirate subdivision: (1) owner occupied; (2) rental</td>
</tr>
<tr>
<td></td>
<td>Squatters: (1) authorized; (2) unauthorized</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refugee camps</td>
<td></td>
</tr>
</tbody>
</table>

Perlman (1976) writes further, ‘What ultimately distinguishes a favela, then, from many otherwise similar lower-class communities is its illegal status in terms of
land use’ (Perlman, 1976:13). Therefore, for Perlman, a squatter’s settlement emerges as a result of illegal occupation of land. However, Davis (2006) in Table 1.1 mixes the term ‘informal’ and ‘squatter’, as the table shows, with squatter settlements falling within the category of informal tenure. Similarly De Soto (1989), in describing the process of informal development, argues that informal housing is typically initiated by the ‘informals’ through unauthorized land invasion. ‘Informals’ denotes the actors of land invasion, which suggest a synonym for squatters. De Soto (1989:18) even calls the end result of such invasion ‘informal settlement’. Likewise, Albertyn (in Huchzermeyer and Karam, 2006:vii) define informal settlements as ‘settlements of the urban poor developed through the unauthorized occupation of land, they are regarded by many as unhealthy and overcrowded blights on the urban landscape ‘squatter camps’ in common parlance’. Mertins et al (1998) considers squatting, either by individuals or groups, as an illegal action. But such action is labelled as ‘informal land claims’ (Mertins et al, 1998:14), while Soliman (2004b) describes informal housing development as a form of development that disobey the state system.

Such mixing up of terminology deserves clarification. The term ‘informal’ has entered the domain of literature on subsistence economies since the introduction of the binary term ‘formal/informal sectors’ by Keith Hart in 1971. The term describes the distinction between the state-linked economies and grass-roots capitalism (Alsayyad, 2004; Soliman, 2004a), which was subsequently adopted by the ILO² (Alsayyad, 2004; Soliman, 2004a; Jenkins, 2006). Hart’s (1973)³ concept was based on his research of the sub-proletariat economy in Ghana. He classifies income typology into ‘formal’, ‘legitimate informal’, and ‘illegitimate informal’. ‘Formal’ represents income obtained from public and private sector salaries, in addition to pension or unemployment benefit. ‘Legitimate informal’ income includes income obtained through professions like farming, shoemaking, self-employed artists, street

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1 Bayat (2004:80) uses the term ‘informals’ to describe the professions of urban subalterns, which include ‘the unemployed, the partially employed, casual labourers, street-subsistent workers, street children, and members of the underworld’.

2 ILO stands for International Labour Office (Jenkins, 2006).

3 The article was presented to ‘The Conference on Urban Unemployment in Africa’ in 1971 (Hart, 1973:61).
hawking, vehicle repairing, and so on; while ‘illegitimate informal’ income links to criminal activities, such as income obtained from smuggling, bribery, political corruption, burglary, armed robbery, gambling, prostitution, and so on (Hart, 1973:69). For Hart, the term ‘informal’ thus represents a wide range of legal aspects, but these aspects all fully or partially exist beyond the control of the state. Similarly, Evers and Korff (2000:153) argue that the term ‘informal sector’ often represents ‘any productive activities that are going on in Third World cities without the regulation, approval or even knowledge of the government authorities.’

However, it is misleading to think that such informality operates only in the Third World. Sociologist Saskia Sassen (2005) argues that urban informality exists in countries with advanced economies. Multinational corporations headquartered in the global cities like New York, Paris, and Tokyo often rely on support from small firms with informal organisation. Informal urbanism clearly plays significant roles in shaping this globalising world. Squatters of the Manila Port, for example, have become a symbol of the existence of Philippine’s urban poor in the global arena. They played a central role ‘in the country’s effort to build an export-oriented economy in response to the challenge of globalisation’, regardless the absence of government support in improving their living conditions (Shatkin, 2004:2469).

Gilbert (2004) found that defining informality is extremely difficult, because the meaning of the term is highly ambiguous. Gilbert (2004:36) offers an example as follows:

While it is usually possible to define informal activity, it is much less easy to categorize the people involved in such activity. Many people do not work wholly in either the formal or the informal sector; rather they switch between them over time, even during the working week. Thus a construction worker in a formal building company will do freelance work in his spare time.

Thus for Gilbert, the difficulties in defining informality lie in the way in which the formality components often slip into the informality and vice versa. Hasan (2004:69) also presents a similar phenomenon of informal settlements in Karachi:

These [settlements] have been developed on government land, illegally occupied by developers with the support of government servants, and

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4 Evers and Korff’s (2000) study focuses on South East Asian cities, which fall within the category of Third World.
protected through bribes given to the police. Almost all these settlements have residents’ organizations (created by the developers), which constantly lobby the government agencies for infrastructure and security of tenure.

We have discussed thus far the usage of the term ‘informal’ in the context of the subsistence economy. Within the context of the built environment, Jenkins (2006) argues that shortly after the adoption of the term by the ILO in the early 1970s, ‘informality’ became widely used in other fields, including housing. One description by Yiftachel and Yakobi (2004:209) explains that informal settlements are ‘spatial dynamics that are not shaped, controlled, or sanctioned by the state’. Such a description is similar to the notion of squatter settlement described by Perlman (1976) above, except that it does not employ the word ‘illegal’. The description thus implies that the phrase ‘informal settlement’ cover a broader range of tenure types than the term ‘squatter settlement’. I suggest squatter settlement might be best regarded as a subset of informal settlement, an initial form of unauthorized settlement that might later gain tenure stability if certain prospects are available. Such classification is evident in Egypt where, as Soliman (2004a:172) reports, the government uses the term ‘informal’ to label all ‘illegal’ housing, because ‘formalization occurs only through the process of legalization.’ Therefore, as Jenkins (2006) has suggested, the division of informal and formal should be seen as a continuum rather than a dichotomy.

![Figure 1.1 Model of formal - informal continuum.](image)

In summary, slum, squatter, and informal settlements are triadic but differ from each other in meaning. The term ‘slum’ links to the socio-spatial quality of a settlement, while the basis for using the words ‘squatter’s settlement’ and ‘informal
speculative settlements’ is the conception of tenure, which I will discuss in section 2.3. Based on Davis (2006), Gilbert (2004), Jenkins (2006), Mertins et al (1998), and Perlman (1976), I develop a diagram depicted in Figure 1.1, showing a continuum of formal-informal settlements, whereby slum lies along the continuum, while squatter’s settlements rest at one end as a subset of informal settlement. There is no stringent border between formal and informal, while the position of squatter settlements in such a continuum mark it at the highest level of illegality, and thus the most vulnerable to risk of displacement.

1.2. Types of settlement process
This section looks at how informal settlement is developed and how the process of development may be best classified. To begin with, I refer to the work of De Soto (1989) as an entry point to understand the built form – tenure nexus. While De Soto’s latter work on the transformation of informal assets into capital (De Soto, 2000) was widely criticized by scholars (see for example Bromley, 2004 and Royston, 2006), I found his earlier work on Peruvian urban informality (De Soto, 1989) is still relevant to be used because it explains the commonality of informal development, as I have outlined in the proposition of my thesis (see ‘Introduction’). De Soto argues that informal housing development is the reverse of the formal housing development. In the former, construction of building comes first, tenure security comes second; while in the formal housing development, tenure security is obtained before the construction of building commences. De Soto (1989) further notes that the process of informal development can be categorised into two models: invasion and accretion. For De Soto, invasion means planned action that could happen overnight. As he has observed in Peru:

It [the invasion] takes place at night or in the early hours of the morning. The day generally coincides with some civic anniversary, in order to reduce the possibilities of a rapid response by the forces of law and order. Whether they are a hundred or forty thousand, the invaders arrive at the agreed place in rented trucks or minibuses, bringing with them poles, rush matting, and everything they need to erect their first dwelling. They enter the land and put up numerous Peruvian flags to show that they are not committing an offense but making a patriotic bid for their right and for social justice. Immediately after this, pickets demarcate the settlement with powdered chalk, in accordance with the plan. Women and children clear the land, and in a
matter of hours, lots have been distributed and rush mats erected on each of them in the form of an “igloo” (De Soto, 1989:21).

From the landowner’s and authority’s point of view, De Soto (1989) calls such action ‘violent invasion’, because it involves the sudden and simultaneous arrival of the invaders, and occasional physical clash with the authority who tries to evict these invaders. But such invasion can be regarded as a participatory planned action as it involves a well-distributed set of responsibilities among actors, a sound understanding of the political situation, and good time management. It is not uncommon for such actions to involve students and professionals like architects, engineers, and even lawyers in the planning of the invasion.

Accretion is a gradual housing development, in which De Soto uses an example of construction of farm-workers’ huts on the farmland in Peru. The farm-owners usually tolerate such occupation, as the workers are usually their employees. However, as the occupancy of the workers becomes more stable, others who do not have any relationship with the farm-owner gradually join in. These newcomers gradually flock up the property, and later negotiate with the farm-owner for their right of housing (De Soto, 1989).

In South Africa, Martin and Mathema (2006) classify informal settlements development into three models. The first model, called ‘accretion,’ takes place gradually - often initiated by a small group of people who subsequently exercise control over the claimed property as other people join in (see also UNCHS, 1982). Martin and Mathema (2006) further write that within such a model, territorial control in post occupancy occurs in two forms: traditional and modern. Traditional territorial control, found mostly in rural areas, is carried out by respected elders who give permission or consent to the person who wishes to occupy part of the existing property; while modern form of control is a developer-like practice, whereby land is subdivided systematically, and occupation of each plot is usually obtained by payment of a fee (Martin and Mathema, 2006).

The second model, as Martin and Mathema (2006) suggest, is land invasion, a planned property acquisition by landless people who form a group that often operates like a developer, similar to De Soto’s (1989) ‘violent invasion’. The third
model is unauthorized development of titled property, whereby a landowner builds houses on titled land for rent or sale, but without state authorization. Martin and Mathema (2006:128) call it a ‘capitalist mode of development’, since the main intention is to make profit. The slippages of formality within informality and vice versa have thus characterized this model, which tends to be dominant in the current practice of urban housing development in the Third World (Bayat, 2004).

Similar to the above three models, land invasions have also characterized the formation of informal settlements in Egypt. Soliman (2004b:115-116) identifies at least three types of land invasion: organized, collective, and scattered. Organized invasion is a planned invasion, which result in what Soliman terms ‘organized settlements’. Collective invasion results in ‘semi-informal settlements’, which have some degrees of formality as the lands are mostly legal. This type of development seems to have a similar character to Martin and Mathema’s third model (unauthorized development on titled property). The third type - scattered invasion - usually occurs in the form of unorganised squatting on the government desert lands.

Kramer’s (2007) study into the case of Cartolandia in Mexico found a clandestine development model. Cartolandia, which denotes ‘land of cartons’, is one of the numerous squatter settlements on the fringes of Mexico City whereby residents built their houses using makeshift materials, mostly corrugated cardboard. They claimed the land and then subsequently engaged in informal property trade, by subdividing the claimed property and selling it to the newcomers to the area (Kramer, 2007).

All the examples above fit with Bayat’s (2004) notion of the politics of urban subalterns, which he terms the ‘quiet encroachment of the ordinary’. He describes the ‘quiet encroachment’ as ‘the silent, protracted, but pervasive advancement of ordinary people in relation to the propertied and powerful in order to survive and improve their lives. It is marked by quiet, largely atomized, and prolonged mobilization with episodic collective action - open and fleeting struggles without clear leadership, ideology, and structured organization’ (Bayat, 2004:90). Bayat continues asserting that these people ‘carry out their activities not as deliberate political acts rather they are driven by the force of necessity – the necessity to survive and improve a dignified life. Necessity is the notion that justifies their often
unlawful acts as moral and often ‘natural’ ways to maintain life with dignity’ (Bayat, 2004:92).

While Bayat above views the squatters as ordinary people, Holston (1999) sees informal and squatters’ settlements fall within the notion of ‘spaces of insurgent citizenship’. Holston uses such a notion ‘to emphasize the opposition of these spaces of insurgent citizenship to the modernist space that physically dominates so many cities today’ (Holston, 1999:157). The modernist space is often linked to the strong influence of CIAM\(^5\) model of planning in shaping the today’s urban built environment. This model ‘appeals directly to state authority to institute the total planning of the built environment’ and ‘privileges the development of the apparatus of the modern state itself as the supreme planning power’ (Holston, 1999:159). However, Holston argues that such a modernist approach to urban planning disregards the existence of ‘spaces of insurgent citizenship’. It has failed ‘to include as constituent elements of planning the conflict, ambiguity, and indeterminacy characteristics of actual social life’ (Holston, 1999:166). This highlights what Shatkin (2004) has argued that informal settlements are regarded as ‘forgotten places’ by the urban planners and policy-makers in this globalising world.

In sum, the global examples of settlements development can basically be seen through two factors: time and state influence. The first factor relates to the length of time required for the development to take place. In this case there are two common models suggested: invasion and accretion. Invasion could be as fast as overnight, planned, and collectively organised. Invasion could also be carried out individually and loosely organised. Accretion is a gradual process of property occupation, usually lengthy and loosely organised.

The second factor - state influence - is the extent to which the state plays a role in settlements development. Since the state represents a formal entity, its influence can be construed as a ‘formalisation’ of the settlement (Guinness, 2009), which may contribute to the way in which ‘space of insurgent citizenship’ operates, and might lead to either continuity or change of the existence of informal settlements.

\(^5\) CIAM is a French abbreviation for the International Congress for Modern Architecture (Mumford, 2000).
1.3. Locations of informal settlement

Informal settlement development takes place in various locations, usually in the cracks between the formal zones of the city. There are at least seven typical locations where informal settlements emerge: urban waterfronts, escarpments, infrastructure margins, inner urban blocks, construction sites, cemeteries, and abandoned buildings.

![Figure 1.2 Slum on an ocean frontage, Mumbai, India (source: http://artsytime.com/life-in-slums-of-mumbai/ accessed on 23 May 2010)](image)

The urban waterfront is a popular location for informal settlements development. While this location may be prone to flooding and land sliding, the need to get closer to water resources and job locations are more important than to avoid the danger of natural disaster and hazardous waste dumped in the river. Informal settlements in urban South Asia and South East Asia have often emerged in such locations. The case studies in this thesis are both on riverbank locations. In other cities, such as in Manila and Mumbai, informal settlements may line canals, harbours, and ocean frontages (Figure 1.2). In Manila, the difficulties in finding affordable housing market in the city had led the workers of Manila Port and their

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6 This account of the typology of informal settlement location is based on my reading of the literature, personal observation, and discussion with supervisors - Kim Dovey and Ross King.
families to squat around the port, which result in the formation of slum on such ocean frontages since the late 1980s (Shatkin, 2004).

Escarpments are other preferred location for informal settlements commonly found in Latin America. The *Favela* in Brazil is an example that has emerged in such location for decades (Perlman, 2004). While visiting an informant for her research, Perlman observed the physical character of escarpment on which a *favela* emerges. She writes:

> To get to her house you had to climb an almost vertical path around and beneath dozens of other shacks. It took about twenty minutes to wind one’s way up from the street in front of Rodrigo de Freitas – much more if it were raining and the path had turned into a slippery slide of mud and sewage (Perlman, 2004: 110).

A similar character appears in the Venezuelan Barrio (Figure 1.3), which sharply divides the city of Caracas into ‘formal’ and ‘informal’ zones of urban environment. Brillembourg and Klumpner (date unspecified) describe the character of the informal zone as follows:

> Much of this informal city of densely packed, ramshackle structures clings to Caracas’ steep mountainsides. Planned and built almost exclusively by the
Speculative Settlements:

Residents themselves, these barrios have no streets in the conventional sense, no paved roadways; people move around on foot, along pathways established by habit, and up and down steep stairs (Source: http://www.holcimfoundation.org/Portals/1/docs/UTF/brillenbourg-klumpner.pdf, accessed on 10 January 2010).

The third typical location is the infrastructure margin, that is, the unused space (easement) between infrastructure facilities and the used public or private lands. The occupations may occur on sidewalks, land gaps lining the railway and water pipes, spaces underneath the bridge, and so on (Figure 1.4). Sidewalk encroachment and occupation of land lining the railway are typical in urban South and South East Asia. Sidewalk encroachment is often linked to informal trade activities, where people build fixed structures.

**Figure 1.4** Along infrastructure margin (railway track, street (on pedestrian way), water pipe, etc.).

**Figure 1.5** Behind formal commercial/residential buildings.
Another preferred location for the development of informal settlements is inner urban block, pockets of vacant land behind a series of formal commercial or residential buildings lining the main streets (Figure 1.5). These relatively well-off ‘formal’ buildings are the facades that make the informal settlements invisible from the thoroughfares. Such phenomena are typical in some major cities of the global South like Delhi, Bangkok, Jakarta, and Manila.

The construction site is another target of occupation by the informals as well. Many of these are temporary, following the duration of the construction project, but may turn to permanent, as seen in the case of Sanjay Gandhi Nagar:

In 1976, a construction company building some new high-rises leased land between the downtown neighbourhood of Colaba and Nariman Point so that its workers could have a place to bunk. This is a common practice in India: construction workers living on-site, in impoverished hovels that they build themselves. When the job finished and the lease expired, some of the people simply refused to move. Slowly, others joined them on their small plot, and soon theirs was a colony of 300 families (Neuwirth, 2006:104).

In some cases the cemetery has become an option for squatting. An example is the encroachment of Cairo’s necropolis by the migrants (El Kandi and Bonnany, 2007). Such encroachment can be traced back in the late 19th century, when Egypt experienced a severe urban crisis that led to the shortage of affordable housing. The tomb keepers of some Cairo’s old graveyards saw it as an opportunity to make profit by subdividing the lands between the tombs for sale. In addition, they also made the abandoned tomb buildings available for sale or rent (El Kandi and Bonnany, 2007). This is not a new phenomenon; Garr (1996), Setiawan (1998), and Winayanti and Lang (2004) for example, have observed the practice of Chinese cemetery squatting in urban Indonesia.

In sum, the gaps or cracks between the formal zones are occupied by the informals because these locations are in some ways under-utilised. Sola-Morales Rubio (1995) calls such locations terrain vague. This notion represents how the commoners see an unattended property as ambiguous, which may lead to speculative occupation of such property. For Sola-Morales Rubio, the meaning of ‘vague’ was derived from French as follows:
The French *vague* has Latin and Germanic origins. The German *Woge* refers to sea swell, significantly alluding to movement, oscillation, instability, and fluctuation. Two Latin roots come together in the French vague. Vague descends from vacuus, giving us “vacant” and “vacuum” in English, which is to say “empty, unoccupied,” yet also “free, available, unengaged” (Sola-Morales Rubio, 1995:119).

For the informals, *terrain vague* is available not because they see nobody has the right over such property, but because they see the absence of those who have the power to control such property as an opportunity for speculation.

### 1.4. Actors and their roles

The term ‘informals’ refers to various actors, in his work on Cairo’s informal settlements, Soliman categorizes actors in Egyptian informal settlements development into six groups: providers, operators, suppliers, regulators, facilitators, funding agencies, and customers (Soliman, 2004a:184). Providers are landowners who intend to put their lands for sale to the operator. Operators are informal developers who speculate by buying land from the legal landowners then illegally subdivide the land for sale.

Suppliers of informal services are brokers who receive a fee for mediating transactions. Another group of suppliers are informal contractors who construct buildings (Soliman, 2004b:102-103). Furthermore, although the settlements developed are informal, the process could involve ‘public/private bodies (facilitators) and governmental agencies (regulators)’. These entities often provided assistance that indirectly supports the development, such as the construction of mosques or educational facilities in the settlements (Soliman, 2004b:103).

Funding agencies can be ‘formal’ organisations like banks, which provide cash for land acquisition. These roles occur when informal developers purchase agricultural land on the urban fringe. But such an agency does not normally involve in the game directly, instead ‘they may play an important role behind the scenes’ (Soliman, 2004b:103). The land subdivision by the above developers is aimed at attracting customers, which are mostly the low-income groups (Soliman, 2004).

The above classification is context-dependent, and it may not be valid in other countries and in other models of informal development in Egypt. However, it
Speculative Settlements: Built Form/Tenure Ambiguity in Kampung Development

shows that the state’s role in informal development is not uncommon. Bayat (2004) has argued that such relaxed approach often becomes a strategy for the state to establish control over the untamed settlements. The ‘normal’ code of the formal worlds is thus no longer valid, instead as Brillembourg et al (2005:74) have observed, these actors use ‘the code of no code’ – the rules of development that develop through what Brillembourg (in Schroder, 2005) calls ‘anticipation and retrofitting’ of both environmental challenges and incompatible state regulations. While informal development often involves the state, rules of the game are not the same as that of the normal state laws; and the state often tolerates them in order to achieve its objectives.

State involvement in the game of urban informality is a key part of a study on Calcutta entitled ‘The Gentleman’s City’ by Ananya Roy (2004), which suggests that the ambiguities, flexibilities and contradictions of tenure in urban informality can be part of a strategy of state power, a strategic ‘unmapping’: ‘The informalized state is thus an entity of greater power, allowing the unceasing negotiation of land claims, but never the full resolution of such claims’ (Roy 2004: 159). This practice involves marginalised males being given roles as community leaders under conditions of patronage. She argues that this has the effect of affirming traditional gender roles, and that these quasi-civic or semi-formal roles become complicit with state oppression. The condition of tenure as ‘unmapped’ becomes a condition for continued oppression7.

1.5. Security of tenure

UN-Habitat defines tenure security as ‘the right of all individuals and groups to effective protection by the state against forced evictions’ (UN-Habitat, 2004:6). According to international law, ‘forced eviction’ denotes removal of individuals, families, or communities from their property, which include land and building (UN-Habitat, 2004). Land and building are thus inseparable components of tenure security. This section looks at how tenure is categorized and whether or not formalization guarantees secure tenure.

7 While it is not necessarily clear whose interests a mapping of tenure will serve, it is a key goal of this thesis to undertake such mapping.
Land tenure is broadly defined as ‘the mode by which land is held or owned, or the set of relationships among people concerning the use of land and its products’ (Payne, 1997:3), and is influenced by local social and political context (Payne, 1997; UN-Habitat, 2004). However, land rights differ from security of land tenure. As UN Habitat (2008:6) notes:

An individual may enjoy complete tenure security, but no rights to sell, develop, or sublet; whereas another may have limited security but be free to transfer their limited rights to others.

Table 1.2 UN-Habitat tenure classification (source: extracted from UN-Habitat, 2004:8).

<table>
<thead>
<tr>
<th>No.</th>
<th>Tenure system</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Freehold</td>
<td>Ownership in perpetuity</td>
</tr>
<tr>
<td>2</td>
<td>Delayed freehold</td>
<td>Conditional ownership. Title granted on the completion of payments or when developments have been completed</td>
</tr>
<tr>
<td>3</td>
<td>Registered leasehold</td>
<td>Ownership for a specified period from a few months to 999 years(^a)</td>
</tr>
<tr>
<td>4</td>
<td>Public rental</td>
<td>Rental occupation on publicly owned land or house</td>
</tr>
<tr>
<td>5</td>
<td>Private rental</td>
<td>Rental of privately owned land or property</td>
</tr>
<tr>
<td>6</td>
<td>Shared equity</td>
<td>Combination of delayed freehold and rental in which residents purchase a stake in their property (often 50%) and pay rent on the remainder to other stakeholder</td>
</tr>
<tr>
<td>7</td>
<td>Co-operative tenure</td>
<td>Ownership is vested in the co-operative or group of which residents are co-owners</td>
</tr>
<tr>
<td>8</td>
<td>Customary ownership</td>
<td>Ownership is vested in the tribe, group community or family. Land is allocated by customary authorities, such as chiefs</td>
</tr>
<tr>
<td>9</td>
<td>Religious (Islamic)</td>
<td>There are four main categories of land tenure within Islamic societies. ‘Waql’ is religious trust land, while ‘mulk’ or individual full ownership is also protected by law. ‘Miri’ or state owned/controlled land which carries ‘tassruf’ or usufruct rights is increasingly common, while ‘musha/mushtarak’ is collective/tribal ownership</td>
</tr>
<tr>
<td>10</td>
<td>Non-formal tenure system</td>
<td>These include a wide range of categories with varying degrees of legality or illegality. They include regularised and un-regularised squatting, unauthorized subdivision on legally owned land and various forms of unofficial rental arrangements. In some cases, several forms of tenure may co-exists on the same plot, with each party entitled to certain rights</td>
</tr>
</tbody>
</table>

\(^a\) The length of lease (999 years) is dubious, but UN-Habitat does not specify the reference for such leasehold period.
UN-Habitat (2004) has made a classification of land tenure (Table 2.2), which shows a wide range of ‘formal’ tenure system and an indication of various forms of ‘non-formal’ tenure. The table suggests that ‘formal’ tenure (numbers 1 – 9) comprises several tenure categories, in which ‘freehold’ tenure holds the most secure position, while customary and religious tenures often fall outside the state tenure system, reflecting certain degrees of informality. Fisher (cited in Payne, 1997) writes that customary land belongs to the whole community, not to the individual. He further writes that within such a tenure system, ‘Security of tenure and of subsistence opportunity arises out of kinship with and membership of the community group. Land is a social resource; it is through his or her relationship with the land that the individual perceives a sense of place and of personality’ (Fisher quoted in Payne, 1997:3).

While the customary tenure system places the whole community as the holder of tenure, in the religious tenure system (in this case is referred to as Islamic) the initial rights of land ‘belong to the person who ‘vivifies’ it’ (Feder and Noronha, cited in Payne, 1997:5). Non-formal tenure (number 10) is complex, largely invisible, and country-specific. Such invisibility occurs because non-formal tenure is not recorded in the state ‘surveillance’ system (planning, taxation, and the like), which fits with Bayat’s observation:

Unregulated jobs, unregistered peoples and places, nameless streets and alleyways, and policeless neighbourhoods mean that these entities [informal settlements] remain hidden from the governments’ books. To be able to exert control, a state needs to make such entities visible. Indeed, programs of squatter upgrading may be seen in terms of opening up the unknown to be able to control it. Conflict between these encroachers and the state, therefore, is inevitable (Bayat, 2004:95).

Yet because empirical data on informal urban land tenure is difficult to obtain, there is a paucity of studies with this domain, in stark contrast to the abundance of studies on rural land tenure (Evers and Korff, 2000:170). Despite a growing interest and concern with urban land tenure studies in recent years in response to the UN Millennium Development Goal, detailed studies on this domain remain rare. De Soto’s (2000) seminal study on extralegal property in developing countries is one example. He studies how extralegal property acquisition operates in
developing countries and the former Soviet Republic. But regardless of his claim that his research team conducted rigorous study on informal property tenure in those countries, the published result in the *Mystery of Capital* (De Soto, 2000), does not provide detailed empirical information on the tenure system of the area studied.

With regard to informal tenure (classified as ‘non-formal’ in Table 1.2), Payne (1997) has made a generalisation based on cases occurring in various countries, in which he proposes six categories as follows:

a. *De facto* secure tenure

Payne argues that this type of property rights ‘carries no legal status and perceptions regarding security differ from one country to another’ (Payne, 1997:31).

An example of this tenure category is residents of *gecekondu* in Turkey, who gain *de facto* tenure as they can resist forced eviction by quickly adapting their makeshift shelter to a more permanent construction, as permanent construction by Turkish law cannot be demolished before the delivery of a court order (Neuwirth, 2005). *De facto* tenure can also occur as a result of state intervention and recognition, including the connection of basic infrastructure (electricity and water) and recognition of residency.

b. Official recognition

This category suggests that recognition of tenure ‘can be achieved through default over time or by the active efforts of residents, developers, and local politicians’, albeit without legal title (Payne, 1997:31-32).

Appropriation of the built environment through slum upgrading is a typical example of how residents of informal settlements gain this official recognition. Slum upgrading through the mechanism of self-help has been a trend since the late 1970s, when Turner’s seminal work titled *Housing By People* (Turner, 1976) was published. This publication subsequently inspired many governments of the Third World to make policies addressing low-income housing. Turner argues that dwellers’ autonomy in making decision with regard to their housing needs will stimulate the improvement of their quality of life (Turner, 1976). However, in the
1970s, Peruvian state schemes to provide infrastructure support often led the landlords to alter the tenure profiles of the existing squatters living on their properties. Once the land values increased as a result of government infrastructure supports, these landlords might seek a more affluent group of renters or buyers and displace the squatters (Castells cited in Davis, 2006:89).

c. Land rental
Payne (1997:32) writes, this tenure type ‘is commonly found in areas where private or customary landowners wish to derive an income from undeveloped land pending more profitable use’ (Payne, 1997:32). Renters’ tenure position within these market-driven informal property lease are usually ‘very limited’ and tend to be insecure because renters’ tenure is vulnerable to the power of landlords, managed through unwritten agreements (Payne, 1997:33).

d. Use rights
Use rights is a tenure level ‘between full, formal title and de facto security and are intended to retain long term control over land by the owners, usually the state, whilst providing residents with sufficient security to stimulate improvements’ (Payne, 1997:33).

e. Co-operative ownership
While all the above categories cover individual tenure, co-operative ownership suggests that land is collectively owned and managed by the community. This type of property tenure, however, ‘has not been widely adopted in developing countries’ (Payne, 1997:33). This model has been suggested as a strategy to prevent coercive displacement of informal settlements (Durand-Lasserve, 2006).

f. Customary tenure
Customary tenure initially derived from the practice of agriculture. Table 1.2 suggests that in UN categorisation, this tenure falls within the formal tenure system. However, in this categorization, Payne (1997) regards it as informal/extralegal, which seems to be based on the fact that despite the rules
governing customary tenure are usually being known to members of the community, these rules are generally unwritten. Protection of the rules in a written form is considered unnecessary because in past practices of land clearing for agricultural purposes, land was considered abundant and ‘had virtually no economic value’ (Feder and Noronha cited in Payne, 1997:4). However, with the high pace of urbanization and scarcity of land today and the co-existence of other types of tenure described above, ‘the legal status of the customary holdings may also become ambiguous or even subordinate’ (Payne, 1997:4).

In addition to the categorization of tenure, Payne (2003) developed a model of measuring the level of tenure security (see also Calderón, 2003; Payne and Khremo, 2004), as seen in Figure 1.6. The scale shows that the pavement dweller has the least insecure tenure, while the leaseholder and free-holder have the highest tenure security. Of course, this model is not intended to give a precise measurement, rather it is meant to show the typology of the dwellers-tenure relationship.

In summary, tenure categorizations as demonstrated above by UN-Habitat (2004) and Payne (1997) highlight what Razzaz (1993) has argued that ‘types of tenure’ and ‘security of tenure’ are not always related. A renter of an apartment might have a greater security of tenure than a person who risks obtaining a mortgage to formally own a house (Razzaz, 1993). Security of tenure can even be gained through informal purchase of property (Jenkins, 2006). House ‘owners’ in informal settlements might enjoy the freedom of selling their property, while a formal renter of an apartment does not have the right to do the same. Such a familiar example confirms a vague relationship between De Soto’s (2000) seminal formula for legalising the extralegal property to convert the ‘dead capital’ into liquid assets and the attainment of tenure security. In the *Mystery of Capital*, De Soto (2000) argues for the legalisation of the individual land titles so that poor people have a stake in the market, which enables them to raise and use such capital to gain further investment capital. Informal property, as De Soto argues above, is ‘dead capital’ because it cannot be leveraged to produce growth. Therefore, the task is to formalise extra-legal (informal) tenure (De Soto, 2000). Notwithstanding the
soundness of De Soto’s formula, there is considerable evidence that instant legalization does not work. Royston (2006) argues against De Soto that integration of residents into a formal market system often does not serve their interest - when residents who are granted legal tenure sell their property they are after, displaced back to a low level of tenure.

<table>
<thead>
<tr>
<th>TENURE CATEGORY</th>
<th>Pavement dweller</th>
<th>Squatter tenant (Partial possession)</th>
<th>Squatter ‘owner’</th>
<th>Tenant in unauthorized subdivision</th>
<th>Urban legalization</th>
<th>Owner in unauthorized subdivision (possession declared)</th>
<th>Legal owner – unauthorized construction</th>
<th>Tenant with contract</th>
<th>Lease-holder</th>
<th>Free-holder</th>
</tr>
</thead>
<tbody>
<tr>
<td>High security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Low security</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1.6 Relationships between tenure category and degree of security (based on Payne, 2003:171; Calderón, 2003:296; and Khremo and Payne, 2004:184).

1.6. Transformation

Continuity and change of informal settlements occur as a result of intervention from both dwellers and outside actors. The latter are external agents (the state, non-governmental organization (NGO), and private entities) whose interventions in the survival of the settlements could lead to two opposite transformational outcomes: improvement of tenure or displacement of tenants. Improvement of tenure, as briefly discussed in the above section, is often termed *de facto* security of tenure. According to UN-Habitat (2003), one major cause of *de facto* tenure is state intervention through various forms of improvement of the built environment, ranging from installation of basic infrastructure to assistance in the construction of
public buildings. The following are some examples that represent tenure improvement and tenant displacement.

1.6.1. Improvement

State assistance in settlement’s improvement occurs in two forms: physical upgrading and urban regularisation. The former simply upgrade the built environment without changing its pattern. Neuwirth’s (2005) study on Sanjay Gandhi Nagar (India) is an account of physical upgrading. Neuwirth describes that for decades the residents of this slum lived without electricity and clean water supply, but ‘By 1989, the residents managed to get the electric company to install 15 electric meters, and all 315 households drew their power from those 15 lines’ (Neuwirth, 2005:108). He continues, ‘In 1998 the electric company installed individual meters for every house in the community, and almost all of those home are now solid, two storey, poured concrete buildings’ (Neuwirth, 2005:109). In less than ten years, all houses that previously relied on illegal electricity tapping enjoyed a completely normal electricity connection. Moreover, while these houses were previously makeshift shacks, they are now made of concrete, boasting a greater sense of permanence and tenure. This highlights what Holston (1999) has argued, that within the ‘spaces of insurgent citizenship’ (Section 1.2) the rules of development develop itself without having to rely on the state-operated systems.

The second form, urban regularisation, is mainly adopted in Latin America, such as in Bolivia, Chile, and Peru (Mercado and Uzin, 1995) and in Brazil (Fernandes, 2006 and Handzic, 2009). While De Soto’s (2000) notion of legalization mainly aimed at converting extralegal property into liquid capital, regularization combines legalisation with physical improvement. Such regularisation is mainly aimed at solving the acute illegal occupation of land, irregular growth of settlements as a result of uncontrolled planning, and lack of basic infrastructure (Mercado and Uzin, 1995). Therefore, regularisation seeks more holistic outcomes than simply legalising the property. But Fernandes (2006) asserts that not all informal settlements are feasible for regularisation, as they often exist in hazardous and unhealthy areas. To this extent, relocation of the settlements is often the option chosen by the authority to prevent further growth in such areas.
1.6.2. Displacement

Relocation can be seen as a form of displacement, the second type of transformation. Such displacement can occur in the form of forced and coercive evictions. Forced eviction, the most threatening form of displacement, is the ultimate risk for dwellers, encompassing all levels of income groups and tenure. Du Plessis (2006:181) suggests that forced evictions occur as a result of one or any combination of the following activities:

...development and infrastructure project; large international events, including global conferences and international sporting events such as the Olympic Games; urban development initiatives, aimed at drawing investment into previously neglected areas and creating world-class cities; property market forces, often supported by government intervention, resulting in systematic gentrification of areas, usually at the direct expense of the poorer residents; the absence of state support to the poor under the deteriorating economic conditions, and political conflict resulting in ethnic cleansing of entire communities and groups.

The way forced eviction operates varies, but numerous reports on such activities published by COHRE (Centre On Housing Rights and Evictions) and UPC (Urban Poor Consortium)\(^9\) suggest that there are two typical methods of evictions: direct and indirect. The former is the most common type, a straightforward method whereby the police and other representatives of authority directly engage with clearance of the settlements, often involving harassment of the evictees to secure compliance.

An example of direct forced eviction is the displacement of bridge dwellers in Manila. In February 2007, as COHRE (2007) reports, Metro Manila Development Authority (MMDA) forcibly evicted 141 families (about 700 people) who lived under the Manila’s South Superhighway Bridge. Hundreds of MMDA personnel and the police arrived at the targeted area without giving any prior notice. Clashes between dwellers and these personnel were unavoidable as dwellers were prevented from collecting their personal belongings. COHRE’s advocacy on behalf of these dwellers did not seem to affect the government attitude towards the squatters, as the total

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\(^9\) See [www.cohre.org](http://www.cohre.org) and [www.urbanpoor.or.id](http://www.urbanpoor.or.id).
number of people evicted in the Northrail-Southrail Linkage Project has reached ‘approximately 400,000 people (80,000 families)’ which became ‘the largest planned displacement of people in the history of the Philippines’ (www.cohre.org, accessed on 8 October 2009).

Unlike direct methods, indirect methods of settlements clearance enable the authority to avoid directly handling the evictees, thus avoiding accusations of human rights violation. One typical example, as UPC (2009) reports, is the use of a fabricated fire incident, such as occurred in Jakarta in late September 2009. In this incident, more than 1000 houses in kampung Rawa Bebek were completely destroyed by fire, leaving more than 5,500 residents homeless. One source claimed that the fire was caused by an electricity fault, but many residents did not believe it as such incident was the third in this neighbourhood, with the first fire destroying the neighbourhood in 1984, and the second in 1996. All of them occurred in a couple of days after the end of Ramadhan, when residents were having holidays to visit their extended families and relatives outside Jakarta (www.urbanpoor.or.id, accessed on 8 October 2009).

In India too, the use of arson to evict squatters is not uncommon. For example, in 1985 two-thirds of Sanjay Gandhi Nagar settlement was destroyed by fire. Some residents believed that the fire was set deliberately, but the community leaders argued that it was an accident. When the residents began to rebuild their homes, the authorities sent a notice saying that their act ‘was considered an encroachment and was subject to demolition’. Later the police arrived and demolished all these rebuilt shelters (Neuwirth, 2005:105).

The case of landlords who allegedly burned the huts in a Mumbai slum (Masselos, 2007) is another Indian example of indirect forced eviction. While the huts are valuable commodities in a Mumbai slum, the renters are difficult to remove when the lease has expired. These renter-squatters have no title, but the longer they stay, the harder it is to move them out. As Masselos (2007:180) writes:

...hutment dwellers were subject to shanty patterns of power that involves obligations to pay rent for the space they occupied. Their rents went to landlord who equally had no title to the land or to the rent – excepting that he had physical force at his disposal to ensure payment. Thus land or space
was a commodity in hutment areas and was controlled through elaborate systems of extortion.

The displacement of hutment dwellers, either through a direct force (enforcement by the gangs) or indirect means (using arson to demolish the huts), occurred because the landlord saw the increasing land value as a profit-making opportunity. By contrast, Mumbai's Rent Act gave almost no opportunity to these landlords (both formal and informal) to increase the rent cost and displace renters, even if the leases have expired (Mehta, 2007). As a result, indirect forced eviction became a cost-effective choice for the informal landlords.

While forced eviction typically involves a direct clash between the authority and the evictees, coercive eviction occurs gradually, and is typically caused by the gentrification that follows market-driven legalization of informal settlements. Such low cost housing is not affordable to the squatters who typically receive very low compensation for the properties they have ‘sold’ to the state. This often leads them back to squat or create informal settlements elsewhere. Anthropologist Lea Jellinek (1991) presents an apt example of such eviction with the case of kampung Kebun Kacang (Peanut Garden) demolition in Jakarta. The demolition was carried out because the government planned to eradicate slums and rehouse the existing poor residents of Kebun Kacang. While few of former residents could afford to move into the new state-sponsored walk up flats, the majority who could not afford moved elsewhere in Jakarta, adding the burden of the existing informal settlements. Jellinek writes a reflection:

City planners, with their concerns for physical appearances, are offended by the sight of slums. They see them as chaotic, unsightly and lacking of amenities. Their answer is to bulldoze slums and replace them by higher standard housing. But demolition of slum communities, even if they are replaced by flats, has often reduced the total housing stock and simply moving housing problem from one area to another. Richer residents tend to move into new apartments, whilst the poor crowd into the remaining pockets of inner city slums, or create new shanty towns on the edges of cities (Jellinek, 1991:127).
1.6.3. Tenure negotiation

There are many cases where residents show their capacity to negotiate and resist, and prevent the realization of the eviction plan. Besides the case of *kampung* Gondolayu (see Introduction), Neuwirth’s (2005) experience living with residents of *gecekondu* (the house constructed overnight) is another example of how continuous resistance has extended and stabilised residents’ tenure. Neuwirth (2005:144) illustrates how a *gecekondu* survived after the second demolition by the authority:

They had no homes. They were living in makeshift tents, in mud. They were desperate. But they learned. The third time, they made friends with someone who knew some city officials (perhaps some money even changed hands) and, finally, their homes lasted through the night. By morning, they had become official *gecekondu* residents (the word is a combination of gece, “night” in Turkish, plus kondurmak, meaning “top happen” or appear”).

The *gecekondu* residents could maintain the existence of their houses because they took the advantage of Turkish law, which states that a tenant who has moved into a well structured house cannot be evicted unless the court tells the authority to do so (Neuwirth, 2005). The law also allows a community with a minimum population of 2,000 to apply to federal government for approval to organize a ‘quasi-independent municipality’ (Neuwirth, 2005:145). Such community organization would not only strengthen the settlements’ legitimacy, but would also stabilise the community’s identity - an integral part of tenure security.

The two examples above fit with Bayat’s (2004) notion of the politics of urban subalterns, which he termed ‘quiet encroachment of the ordinary’. He describes the ‘quiet encroachment’ as ‘the silent, protracted, but pervasive advancement of ordinary people in relation to the propertied and powerful in order to survive and improve their lives. It is marked by quiet, largely atomized, and prolonged mobilization with episodic collective action - open and fleeting struggles without clear leadership, ideology, and structured organization’ (Bayat, 2004:90). Bayat also suggests that these people ‘carry out their activities not as deliberate political acts rather they are driven by the force of necessity – the necessity to survive and improve a dignified life. Necessity is the notion that justifies their often unlawful acts as moral and often ‘natural’ ways to maintain life with dignity’ (Bayat, 2004:92).
In summary, this section sees how dwellers and external actors shape the built environment of informal settlements, which can lead to two opposite outcomes: improvement or displacement of dwellers’ tenure. Improvement of tenure is often expressed through the use of sound building materials to create a higher sense of permanence, while displacement of dwellers might involve the demolition of settlements. All of which influence the morphology of the built environment.

1.7. Morphology of informal settlements

Urban morphology as a domain of study could contribute to a better understanding of the phenomena of informal settlements, but very little attention has been paid to such a domain in the vast literature on informal settlements. This section discusses how the few existing studies on urban informality employ a morphological approach. However, before discussing such contributions, I want to begin with a general introduction of urban morphology as a scientific domain.

In the context of urban studies, the term morphology denotes the study of ‘urban structures, patterns, and form issues’ (Larice and MacDonald, 2007:229), and in broader term, it studies ‘the city as human habitat’ (Moudon, 1997:3). Some scholars including Moudon, use a combined term ‘typomorphology’ (a combination of ‘typology’ and ‘morphology’), which denotes ‘the study of urban form derived from studies of typical spaces and structures’ (Moudon, 1994:289). Such morphological analysis, as Moudon (1997:7) summarizes, is based on the following principles:

1. Urban form is defined by three fundamental physical elements: buildings and their related open spaces, plots or lots, and streets.
2. Urban form can be understood as different levels of resolution. Commonly four are recognized, corresponding to the building/lot, the street/block, the city, and the region.
3. Urban form can only be understood historically since the elements of which it is comprised undergo continuous transformation and replacement.

Notwithstanding the well-established domain of urban morphology, the vast literature in this field predominantly studies the settlements in the Western (First)
World, which have largely been shaped by city planners, architects, and professional builders, as well as formal governance (for example Conzen, 1981a and b; Moudon, 1997; Cannigia, 2001; and Whitehand, 2001). By contrast, most literature on informal settlements has paid very little attention to the study of built forms. Architects and urban planners tackling the issues of urban informality tend to focus their attention on development processes and policy, which is not surprising as issues of poverty and tenure security often have nothing to do with the built forms.

Within such limitations, the few existing studies that do include morphological aspects of the built environment can be categorized into three types. First, there are the studies that intentionally use a morphological approach through mapping and imaging as tools for analysis, which I term a ‘graphical approach’. And second, are those studies that narrate the physical characteristics of the settlements but without the intention to incorporate the domain of urban morphology, I call this a ‘narrative approach’. The latter does not usually employ the word ‘morphology’ to frame the analysis, but the textual descriptions might fit to the notion of urban morphology. The third type combines both graphical and narrative approaches.

1.7.1. Graphical approach

The most sophisticated example of the ‘graphical approach’ I have found thus far is the work of Rybczynski et al (1984) on the morphological analysis of four informal settlements in Indore, India. This research report demonstrates a holistic approach to the morphological study of informal settlements using the principles similar to those Moudon (1997) has summarized above, regardless of the missing word ‘morphology’ in this work.

The level of analysis goes from street/blocks to interior space (Figure 1.7), while the mapping and graphical analysis covers the following areas: house extension, workplaces, small shops, trees, public structures, vehicles, and access/street (Rybczynski et al, 1984). Moreover, the human dimensions (anthropometric) in relation to their various activities in the workplaces are measured as well, resulting in an innovative yet comprehensive record of spatial requirements for various types of human daily human activities in informal settlements. However, while such in-depth analysis may well give a comprehensive
speculative settlements: built form/tenure ambiguity in kampung development

precedent for analysing the built forms and dwellers’ activities, it does not specifically cover aspects related to tenure.

figure 1.7 an example of detailed morphological analysis of a workplace in informal settlements (source: extracted from rybczinski et al, 1984:9).

the work of el kady and bonnamy (2007) on cairo’s necropolis (city of the dead) is another example of the graphical approach. el kady and bonnamy use a morphological mapping technique to identify the continuity and change in cairo’s ancient cemetery, as a result of squatting (figure 1.8). the morphological maps explain the gradual encroachment by squatters since the early 20th century, which indicate the location of each informal settlement and the current footprint of the cemetery. the work also reveals the encroached (re-used) buildings and encroached lands between these buildings, the existing functions, the level of storeys in the building, and the material used for building expansion and appropriation. in addition, el kady and bonnamy present an analysis of economic, political, and social factors that have influenced the continuity and change of such necropolis, as well as the everyday life of the squatters. referring to moudon (1997), we can see that el kady and bonnamy’s morphological analysis focuses on two levels of resolution: street/blocks and building/lots. it also offers a historical analysis on the continuity
and change of the built environment. However, although the position of inhabited tombs and encroached lands between the tombs are mapped (Figure 1.8), issues related to tenure are not morphologically analysed.

Figure 1.8 An example of morphological map of an inhabited Cairo’s necropolis (source: extracted from El Kady and Bonnamy, 2007:260).

The work of Funo et al (2002) on the typology of kampung Sawahan in Surabaya and Funo et al (2005) on the typology of kampung Luar Batang in Jakarta is a further example of this type. The study focuses at the level of building/plot, while morphological analysis was employed to determine the variations of house types and how tenants have transformed them. The studies also include analysis of room arrangements and typical functions of these rooms, the building materials, and building structures. Aspects related to tenure, however, are not included in the analysis.
1.7.2. Narrative approach

The second type of literature, describes the morphological features of the settlements in a narrative form. Such a manner of description is typically found in anthropological and social research on informal settlements (e.g. Perlman, 1976 and 2004; Sullivan, 1986; Guinness, 1986 and 2009; Murray, 1991; Neuwirth, 2006). However, the textual description of the built environment is usually not the focus of anthropological research. Instead, it is intended to inform the readers about the setting of human activities, while human activities are the focus of such research. The journey of Robert Neuwirth to Rocinha, a *favela* in Rio de Janeiro, is an example. As Neuwirth narrates:

Standing there, I viewed the impressive panorama of a neighborhood of row houses piled on top of each other. Their form was dynamic: bricks jutting out an odd angle, partial floors framed in concrete, walls that only rise to end abruptly in the soft blue of the sky. Houses seemed to twist towards the sun, crowding each other for light and air. From a distance there seems to be no roads, no yards, no restful space of any kind. Just a beehive of human habitation. I took it all in, vowed by the community’s presence and permanence (Neuwirth, 2006:36).

The main intention of Neuwirth’s work is not to describe the urban morphology of an informal settlement. Instead it is about the life of Rocinha’s residents. But his notes vividly describe the morphological character of the setting to support his main story.

Other work of Neuwirth on Kibera, an informal settlement in Nairobi, provides a more detailed morphological depiction:

Kibera is, for the most part, a city of mud blockhouses. Each structure is divided into single rooms, which are approximately 10 by 10, or 100 square feet. Some blockhouses can have as many as 20 rooms. Ventilation is through the door and, sometimes, a small window. In some rooms, the door goes to an interior hallway and the window lets out on a trash-filled alley scarcely more than a foot wide (Neuwirth, 2006:72).

Similar patterns of narration occur in the work of other anthropologists like Jellinek (1991), Guinness (1986 and 2009), and Sullivan (1992). Their works are not about urban morphology, but they incorporate morphological narratives to support their
claims. What is apparent in this narrative is that informal settlements are socio-spatial systems and places where social and spatial aspects are inextricably intertwined.

1.7.3. Combined approach
While the works discussed in the preceding sections do not specifically mention the word ‘morphology’, they follow the principles of urban morphology as summarized above by Moudon (1997). In other words, scholars often unconsciously adopted morphological narrative, because the built form is an unavoidable part of everyday life. The ‘graphical approach’ is typically used in research primarily intended to examine built forms, while the ‘narrative approach’ tends to be used as supporting evidence of other domain of research on informal settlements. The task of this research is to combine both approaches, and one model of research that follows such direction is the work of Brillembourg, Feireiss, and Klumpner (2005) on the Informal City of Caracas. They combine both graphical and narrative approaches in describing their analysis of informal settlements.

Brillembourg et al (2005) examines the evolution of Caracas’ barrio10, using a combination of photographic, morphological mapping, and narrative methods. One example of the combination of narrative and graphical methods, which vividly describe the process of housing development, is the case of a house construction in La Vega, one of the barrios in Caracas:

Alicia’s house, like most houses in the barrios, offers a completely different way of looking at housing development for those with extremely limited financial resources. We think of it as entrepreneurial village development, based on the concept of the ‘growing house’. As a family grows and money becomes available, the original squatter shack is subsumed into a one-storey concrete and block house, constructed so as to allow vertical addition. Eventually the house reaches several storeys, and the roof becomes a kitchen garden and outdoor living room (Brillembourg et al, 2005:223).

10 *Barrio* is a Venezuelan’s terminology for shantytown.
The gradual house addition depicted in the above narration through the description of how the house ‘grows’, following the improvement of dweller’s welfare, suggests Alicia’s gradual tenure improvement. Brilembourg et al also incorporate such narration with graphical depiction of the growing house (Figure 1.9). This combination provides a better illustration for understanding the relationship between built form and tenure dynamics in an informal settlement.
CHAPTER 2
THE CONTEXT: URBAN YOGYAKARTA

This chapter extends the discussion about informal settlements in the previous chapters, but focuses on the context of urban Yogyakarta. It examines the urban systems that influence the kampung development. The chapter consists of four sections. The first section broadly describes the geography of the city, while the second section briefly reviews the governance system focuses on grass-roots level: the Rukun Tetangga (RT - Household Association) and Rukun Warga (RW - Neighbourhood Association). The third section discusses the notion of kampung, an ambiguous term that is often associated with urban informal settlements. Finally, the fourth section describes the land tenure system in Indonesia and how it operates in Yogyakarta, where the strong influence of customary land tenure continues to challenge the urban housing development.

2.1. Geography

Yogyakarta, often regarded as the ‘heart’ of Javanese culture, is the capital city of Daerah Istimewa Yogyakarta (the Special Province of Yogyakarta)\(^1\). The province is located adjacent to the Province of Central Java (Figure 2.1), while the city of Yogyakarta is approximately halfway between an active volcano called Mount Merapi and the Southern Ocean\(^2\) (Indian Ocean). The north-south imagery axis that links Mount Merapi and Southern Ocean guides the plan of the city, within which the kraton (palace) sits on almost in the middle of the axis. Malioboro Street, the main street of the Yogyakarta CBD, is one of the streets that actualise such axis (Figure 2.2).

There are three main rivers that flow from springs around Mount Merapi towards the Indian Ocean: Gajahwong, Codé, and Winongo (Figure 2.2). For decades these rivers have been the sites of dozens of kampung, including the chosen case studies for this research (kampung Sidomulyo/Kricak and kampung Tungkak), and kampung Gondolayu discussed in the Introduction. These densely populated kampung typically emerge in the back of commercial or

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\(^1\) There are five provinces in Indonesia holding the attribute of ‘special province’. Such attribute denotes a higher autonomy than others.

\(^2\) The term ‘Southern Ocean’ is my literal translation of Laut Selatan, a local term for Indian Ocean.
well-off residential buildings along the main streets. With the population of 396,700 people living on an area of 32.5 square km (Table 2.1), the density of Yogyakarta (12,206 person per square km) is the highest in the province but relatively low compare to that of other major urban centres in Java (Jakarta, Bandung, Semarang, and Surabaya).

![Figure 2.1 Regencies and municipality in the Special Province of Yogyakarta (extracted and reworked from Chaldun, 1989).](image)

**Table 2.1** Population and density of the Province of Yogyakarta (source: extracted from BPS, 2008).

<table>
<thead>
<tr>
<th>Regency/City</th>
<th>Population recorded in 2000</th>
<th>Area (Sq. km)</th>
<th>Density (Per sq. km)</th>
<th>Percentage of area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kulonprogo (Regency)</td>
<td>370,000</td>
<td>586.3</td>
<td>632.7</td>
<td>18.4</td>
</tr>
<tr>
<td>Bantul (Regency)</td>
<td>781,000</td>
<td>506.9</td>
<td>1,540.9</td>
<td>15.9</td>
</tr>
<tr>
<td>Gunungkidul (Regency)</td>
<td>670,400</td>
<td>1,485.4</td>
<td>451.4</td>
<td>46.6</td>
</tr>
<tr>
<td>Sleman (Regency)</td>
<td>901,000</td>
<td>574.8</td>
<td>1,568.1</td>
<td>18.0</td>
</tr>
<tr>
<td>Yogyakarta (City)</td>
<td>396,700</td>
<td>32.5</td>
<td>12,206.5</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>3185.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 2.2 Map of Yogyakarta city (note the position of Kraton (Sultan Palace) along the North-South axis (Malioboro Street) that links Mount Merapi with Indian Ocean). Source: Yogyakarta Tourism Map (reworked), accessed from www.indonesia-tourism.com on 10 January 2009.
2.2. Neighbourhood governance

*Kampung* development in Indonesia cannot be separated from the local governance system, particularly the neighbourhood governance, which has existed since the pre-colonial times. This section describes the evolution of neighbourhood governance system in Indonesia, with the special reference to urban Yogyakarta, from the colonial *kampung* to today’s RT/RW. The literal translation of *Rukun Tetangga* (RT) is ‘Neighbourhood Association’, while *Rukun Warga* (RW) is ‘Residents Association’. But in practice, RT means ‘neighbourhood’ or ‘association of households’, while RW means ‘association of neighbourhood’.

2.2.1. Colonial kampung

According to Pigeaud (cited in Sullivan, 1980), neighbourhood administrative system was operated in the 14th century, when the kingdom of Majapahit ruled Java and most part of the today’s Indonesia. In the colonial times, *kampung* administration system existed in the Sultanate (Kingdom) of Yogyakarta, within the concentric pattern of the Sultanate governance system (Figure 2.3).

![Figure 2.3](image.png)

*Figure 2.3* The concentric pattern of Javanese state concept and the position of *kampung* within such pattern in the pre-independence times (source: Selosoemardjan, 1962:24, reworked based on Sullivan, 1980; 1992).
In the above pattern, the Sultan is the centre of universe, enveloped by kraton (the court), which is the residence of the Sultan and his family. The second circle, called nagara (capital city), is the place where ‘matters regarding the state were discussed and decided upon’ (Selosoemardjan, 1962:25). Also in this territory, the Sultan organised settlement compounds (called kampung) into three zones following the dominant social and occupational backgrounds of its inhabitants. For example, one zone was dedicated for residential areas of ‘princes, nobles, and power wielders’ (Sullivan, 1992:22). Another zone accommodated ‘foreign quarters for colonialists, traders, emissaries, visitors, and non-Javanese subjects’ (p.22), while another was inhabited by ‘various occupational groups’ (p.23). These occupational groups can still be recognised today. For example, the word ‘kauman’ has been attributed to a well-known kampung Kauman in the center of today’s Yogyakarta, as this kampung has been inhabited predominantly by kaum (devout Muslim scholars) since the pre-independence times.

In the 19th century Batavia (today’s Jakarta), the Dutch also contributed to the existence of neighbourhood administration and kampung, through the separation of European residents from other ethnicities. As Willem van der Molen (1993:318) writes:

The separation between the living quarters was maintained to a certain extent during the nineteenth century: the Europeans settled in the new or upper town and along the main road between the old and the new town, the non-European inhabitants took possession of the old or lower town or lived in districts, interspersed among the European districts, the so-called kampungs. The distinction between the Indonesian immigrants themselves, however, disappeared gradually, to be replaced by the new amalgam of Orang Betawi, Batavians.

The gradual emergence of the ‘hybrid’ Batavians (Betawi People) mentioned above, marked the division of the city into two categories of residents: Batavians and Europeans. The former lived in the haphazard kampung, while the latter dwelled in the planned and well-off residential areas. Similarly in colonial Yogyakarta, despite the co-existence of the Sultanate authority, the Dutch planned exclusive residential areas for the Europeans. However, for such purposes, the Dutch relied on the land allocated by the Sultan. Figure 2.4 is a portion of 1925 map of Yogyakarta produced by the Colonial government, which shows a stark contrast between the planned Dutch administered settlements and the blank (green) spaces of the unmapped kampung.
Apart from the work of Sullivan (1992), which suggests that these kampung were under the Sultanate administration, I have not found any detailed references that describe how these kampung were administered, except that the local governance of the kampung prior to and during the colonial era was very largely informal, yet operating the system known as ‘Roekoen
Tetangga’ (RT). However, Figure 2.5 (Left) shows that neighbourhood surveillance system, called *ronda* (night patrolling) existed in the colonial *kampung*, which suggests that the neighbourhood’s security was self-managed by the *kampung* residents. The *gapura* (gate) typically placed on the street that led towards the *kampung*’s interior (Figure 2.5 Right) also suggests a form of security control imposed by the residents, which reflect the existence of neighbourhood informal governance. Gates and security post often co-exist as elements of entrance in a *kampung*, where security post could also accommodate non-security functions (Figure 2.6).

![Figure 2.6 A security post and a gate in a Javanese kampung, photographed in 1910 (picture credit: KITLV collection, accessed from http://kitlv.pictura-dp.nl on 24 December 2009).](image)

2.2.2. Japanese neighbourhood administrative system (1942 - 1945)

The defeat of the Dutch and occupation of its former colony (Indonesia) by the Japanese military in 1942 significantly changed the neighbourhood governance of *kampung*. The Japanese reorganised the community groups, both in urban and rural areas, an action aimed at protecting their political interests (Suwarno, 1995). With regard to these political issues, Niessen (1995:126) writes:

> The English and American militaries made serious charges at the Japanese military and for that reason the Japanese sought to mobilize and control the Indonesian people in
every possible ways. Strengthening the role of Roekoen Tetangga\(^3\) fit perfectly in this line of policy.

In so doing, the Japanese structured the households in the existing ‘Roekoen Tetangga’ (RT) into the so-called *tonarigumi*, which was a deliberate copy of the neighbourhood governance system in Japan (Sullivan, 1986; Suwarno, 1995; Niessen, 1995). In Japan, the threat of World War II led the Japanese government to reorganise the *tonarigumi*, converting it into a standard organisation implemented at every lowest level of the neighbourhood around the country, demanding that every citizen must formally be a member of *tonarigumi* (Suwarno, 1995).

During the Japanese occupation, the Indonesian version of *tonarigumi* was also used as the bottom level of administration, consisting of 10 to 20 households (Abeyasekere, 1990; Niessen, 1995; Suwarno, 1995). In Yogyakarta, the Japanese reorganisation of neighbourhood governance began in 1944. All 100 *kampung* in Yogyakarta were renamed as *aza*\(^4\), and each *aza* was further divided into several *tonarigumi*\(^5\) (Sullivan, 1986). The role of these organisations, as indicated above, was mainly to help the Japanese military government in the war (Suwarno, 1995). In the case of Yogyakarta, Poliman (cited in Sullivan, 1986:67) writes:

> The reform was intended to assist the flagging Japanese war effort. Aza officials were called on to maintain civil order, provide diverse data on local populations, and help assemble labor for use in civil and military projects, under pain of severe punishment.

This neighbourhood organization under the Japanese, however, continued to be largely informal and remained similar to the RT system that had previously operated, including elements of self-organization and security.

2.2.3. Establishment of the RK system (1945 - 1989)

The Japanese occupation did not last long, as they surrendered to the allied forces in 1945. The Japanese withdrawal from Indonesian territory and the absence of the Dutch colonial power, led Sukarno and Hatta to proclaim the independence of Indonesia on 17 August 1945. This

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\(^3\) The spelling of ‘Rukun Tetangga’ (RT) in the pre-1950s Indonesia was ‘Roekoen Tetangga’, following the Dutch alphabetical rules.

\(^4\) Aza is a short term of *azazyookai* (Suwarno, 1995).

\(^5\) Sullivan (1986) does not explain whether or not the spatial boundary of *tonarigumi* was the same as that of RT.
moment was followed by the integration of the Sultanate of Yogyakarta and Pakualaman to the newly formed Republic of Indonesia. As stated in the declaration signed by Sultan Hamengku Buwono IX, on 5 September 1945:

His Majesty His Royal Highness the Sultan We Hamengku Buwono IX, Sultan of the State of Ngajogjakarta Hadiningrat declare:

1. That the State of Ngajogjakarta Hadiningrat, which bears a kingdom, is a special territory of the State of Republic of Indonesia.
2. That We as the Head of the Territory hold all the powers within the State of Ngajogjakarta Hadiningrat, and for that reason due to the present situation all the internal governance affairs within the State of Ngajogjakarta Hadiningrat from now on are under Our hands and all other powers are under Our hands.
3. That the relationship between the State of Ngajogjakarta Hadiningrat and the Central Government of the State of Republic of Indonesia, is direct and We are responsible of Our State directly to the President of the Republic of Indonesia.

We order all the residents of the State of Ngajogjakarta Hadiningrat to comply with this declaration.

Ngajogjakarta Hadiningrat, 28 Puasa Ehe 1876 or 5-9-1945
Hamengku Buwono IX

The above declaration was followed by the amalgamation of Yogyakarta and Pakualaman into a province called ‘Daerah Istimewa Yogyakarta’ (the Special Territory of Yogyakarta), and led to the appointment of Sultan Hamengku Buwono IX and Paku Alam VIII as the Governor and Vice Governor, respectively, of the newly created province, in the late 1940s (Atmakusumah, 1982).

While the Western allied forces abolished Aza and tonarigumi when they territorialized Japan in 1945 (Niessen, 1995), the withdrawal of the Japanese military from Indonesian territory did not automatically abolish the aza and tonarigumi in Yogyakarta. Suwarno (1995) writes that Sultan Hamengku Buwono IX continued to implement the system by formally changing the term aza to Rukun Kampung (RK) and tonarigumi to Rukun Tetangga (RT) in 1946, without changing their basic organisational structure. The main task of these organisations was to assist the government, but they ‘remained outside the state sphere as legally defined’ (Sullivan, 1986:68). In other words, RK and RT were intended to become a self-adaptive informal system within the

6 Pakualaman was a princely state located adjacent to the Sultanate of Yogyakarta (see Figure 2.2).
7 In translation from Kompas, 6 September 2008. At the same time Prince Paku Alam VIII also made a similar declaration.
large formal governance system. This, as Suwarno (1995) writes, was implied in the local government regulation issued in 1947, regarding neighbourhood security. The regulation stated that all male residents aged 15 years and above were obliged to participate in *ronda* activity within their neighbourhood, unless they had a valid reason for not participating. However, the management of *ronda* including the consequences for those who were unable to participate, was up to the *kampung* community to decide.

Suwarno (1995) claims that RK only existed in Yogyakarta, which might be true as an early published research on this topic titled *Neighbourhood organisation in Jakarta* (Logsdon, 1974) notes that the term ‘RW’ (not RK) was formally used in Jakarta in the 1960s and 1970s, following the regulation on RT and RW passed in 1966 by the Governor of Jakarta (see also Yoshihara and Dwianto, 2003).

In the late 1960s, the government’s intervention and control of neighbourhood organisations were more obvious, especially after Suharto led the eradication of *Partai Komunis Indonesia* (PKI – Communist Party of Indonesia) in 1965, and the reign of the New Order regime under his leadership. The New Order government imposed more stringent controls on anyone associated with PKI, which had significant implications for the RK management. For example, Sullivan (1986) notes that one of the prerequisites to become a head of RT and a head of RK was proof of no involvement with any activities associated with PKI. Moreover, according to Suwarno (1995), the municipal government of Yogyakarta issued a regulation in 1970, which gave an authority to the Mayor to approve the organisation of RK and RT, in addition to legalising the spatial boundaries of RK and RT. All of which show the shift of RK and RT from a previously independent grass-root organisations, to become state instruments to control the local residents.

Sullivan’s (1986) findings of his research on urban *kampung* report that in the late 1970s a typical formal structure of RK in Yogyakarta would consist of: a head and two vice heads (one responsible for *kampung* development and the other for *kampung* security); a secretary and a treasurer, and several sections, such as youth and education sections present in the organisational structure as well. One RK could administer six to seven RT territories, each of which was headed by an RT leader chosen from among the residents.
The responsibility of RK heads to control the *kampung* security was driven by the national security policy imposed by Suharto’s New Order regime. Kusno (2006) in his study on *gardu* in urban Java writes that in the early 1970s when Suharto began his tenure as the president of Indonesia, he implemented a mechanism of control of citizens, to prevent what he often termed the ‘latent danger of communism’. In so doing, he used two approaches: administrative and spatial controls.

In terms of administrative control, Kusno (2006:109) writes:

To qualify for a job, citizens were required to obtain a certificate of good behavior from the neighborhood where they were living as evidence that they did not need to undergo “self cleaning” (*bersih diri*) from communism.

In Yogyakarta, the RK head was responsible for issuing such a certificate upon a written recommendation from the RT head.\(^8\) Thereafter the certificate would normally go to the Subdistrict head before getting the final approval from the District head.

\[\text{Figure 2.7 A gate of an RK in Yogyakarta, constructed in the early 1980s (picture credit: YPR, 2000).}\]

In terms of spatial control, the Soeharto administration imposed a policy on neighbourhood security often abbreviated as *Siskamling* (*Sistem Kemanan Lingkungan*, broadly

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\(^8\) The practice of issuing the certificate of good behaviour does not exist anymore today.
translated as Neighbourhood Security System), which was first implemented in Jakarta in the 1970s by Ali Sadikin, a well-known governor of Jakarta (Kusno, 2006). Ali Sadikin reported (cited in Kusno, 2006:110) that ‘in the 1970s, the Ministry of Defence institutionalised the neighborhood watch (ronda), and by 1977, 16,718 persons had been trained as officers of civil defence (hansip). For the purpose of ronda, about 2,280 gardus (pos hansips) were constructed throughout Jakarta by 1977’. Similarly, the construction of security posts and gates by the communities proliferated in Yogyakarta. Figure 2.7 is a typical gate installed in the entrance of a kampung. The identity of the kampung inscribed on such a gate (‘Kampung Kricak Kidul’) suggests an expression of formal authorisation of this kampung.

2.2.4. Implementation of the RW system (1989 – today)

In 1983, the New Order government imposed a control on the neighbourhood governance by passing a regulation through the Ministry of Internal Affairs (Regulation No. 7/1983), on the national implementation of RT/RW (Rukun Tetangga/Rukun Warga) system as the lowest form of governance in the city (Suwarno, 1995). While most provinces in Indonesia adopted such regulation almost immediately, there seemed to be resistance in Yogyakarta, because not until 1989 did the provincial government of Yogyakarta make the decision to adopt it (Suwarno, 1995; Guinness, 2009). Once implemented, the new system immediately overrode the existing RT/RK system that had operated for more than four decades in Yogyakarta. Such implementation indeed had a significant impact on the spatial boundaries of the 165 existing RK in Yogyakarta, as these RK were then converted into 615 RW, which covered 2515 RT (Suwarno, 1995).

An example of such impact is depicted in Table 2.2, which is a finding of a research by Bakti Setiawan (1998) on kampung lining Codé River. The number of RK was 29 before 1989, but after the implementation of RW system, they were subdivided into 83 RW⁹. Names of RK before 1989 were formally erased and changed to the numeric RW. Many neighbourhoods, however, did not fully follow such a radical change. They use the new numeric RT/RW system, while maintaining the old name of RK, such as seen in Figure 2.8.

⁹ Based on 1998 figures, which may be different today.
Table 2.2 New names of RK lining Codé River after the implementation of the RW system
(Source: extracted from Setiawan, 1998:133)

<table>
<thead>
<tr>
<th>District (Kecamatan)</th>
<th>Subdistrict</th>
<th>RW Number (After 1989)</th>
<th>Name of RK (Before 1989)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tegalrejo</td>
<td>Karangwaru</td>
<td>RW2</td>
<td>Jetis/Petinggan</td>
</tr>
<tr>
<td>Jetik</td>
<td>Cokrokdesingan</td>
<td>RW5; RW6; RW7; RW8; RW9; RW10, RW11</td>
<td>Jetis/Desingan/Cokrokdesingan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RW10, RW11</td>
<td>Gondolawu Lor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RW12, RW13</td>
<td>Gondolawu Kidul/ Jogovudan</td>
</tr>
<tr>
<td>Paburenan</td>
<td>Sunantarman</td>
<td>RW1; RW2; RW3; RW4; RW5; RW6; RW7; RW8</td>
<td>Ledok Macanat/Gembokan atas/Gembokan Banah/Ledok Cokrodiran</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RW1; RW11; RW12; RW13</td>
<td>Ledok Cokrodiran</td>
</tr>
<tr>
<td>Gondomanan</td>
<td>Neupasan</td>
<td>RW7; RW8</td>
<td>Ledok Batmakan</td>
</tr>
<tr>
<td></td>
<td>Prawirodijian</td>
<td>RW14; RW15; RW16; RW17; RW18</td>
<td>Prawirodijian</td>
</tr>
<tr>
<td>Merganesan</td>
<td>Kepatan</td>
<td>RW7; RW8; RW9; RW13</td>
<td>Kepatan Lor/Kepatan Kidul</td>
</tr>
<tr>
<td></td>
<td>Bintukusuman</td>
<td>RW14; RW16; RW17; RW18</td>
<td>Kepatan/Bintukusuman</td>
</tr>
<tr>
<td></td>
<td>Wirugunan</td>
<td>RW2; RW3; RW5; RW6; RW4; RW5; RW6; RW7; RW14; RW15; RW16; RW17; RW22</td>
<td>Bintukusum/Wirugunan/Sukerkan/Merganesan</td>
</tr>
<tr>
<td>Gondokusuman</td>
<td>Tegalanggun</td>
<td>RW1; RW4; RW5; RW6; RW7</td>
<td>Tegalanggun</td>
</tr>
<tr>
<td></td>
<td>Kerabatu</td>
<td>RW1; RW8</td>
<td>Kerabatu</td>
</tr>
<tr>
<td>Danaurian</td>
<td>Tegalanggun</td>
<td>RW1; RW2; RW3; RW4</td>
<td>Ledok Tukangun</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RW11; RW12; RW13</td>
<td>Tegalanggun</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RW14; RW15; RW16</td>
<td>Jamunahan</td>
</tr>
<tr>
<td>Pakuanomar</td>
<td>Purwokingan</td>
<td>RW1; RW2</td>
<td>Jalera/Ledokasari</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RW3; RW4; RW5; RW6; RW7</td>
<td>Purwokingan/ Bcil</td>
</tr>
<tr>
<td>Umbulharjo</td>
<td>Sarosutan</td>
<td>RW1; RW5; RW14; RW18</td>
<td>Sarosutan</td>
</tr>
</tbody>
</table>

Figure 2.8 A gate of an RT in former RK Kricak Kidul. The sign ‘Kricak Kidul’ still appears on the gate, although the RK system does not exist anymore (picture credit: YPR, 2006).
In addition, the above regulation was intended to accumulate local resources in order to improve the prosperity for the people (Suwarno, 1995). This notion is similar to that of the Japanese’s *aza* and *tonarigumi* in the pre-independence Indonesia. However, the structure and persons who run the RT/RW have to be approved by the municipal government, regardless of the facts that such organisation is managed on the basis of volunteerism and self-managed systems\(^{10}\).

In 2007, the Mayor of Yogyakarta passed a new regulation for the RT/RW system (Regulation No. 33/2007), which guides the process of RT and RW establishment, including procedures for selecting the RT/RW committee and procedures for closing and merging the existing RT/RW. The regulation goes into such detail as guiding the design of RT/RW stamps, and the size of the naming board to inform the public as to the location of RT/RW ‘office’. The RT/RW ‘office’ is typically in the residence of the RT/RW chiefs, but in some cases the RT/RW public service might be located in public (community) buildings.

Implementation of the RT/RW system in Yogyakarta marked a further attempt of the New Order government to use the RT/RW system as a means to gain a greater control over the population’s behaviour (Sullivan, 1992). In other words, the RT/RW administration became an extension of the government’s hands (Suwarno, 1995). While the New Order regime had collapsed in 1998, the current municipal government of Yogyakarta maintained such a panoptical approach\(^{11}\) through the passing out of Regulation No. 33/2007 by the Mayor of Yogyakarta. This regulation states that all the elected members of RW and RT committees must be finally approved by the Subdistrict head and must subsequently report to the Mayor. In other words, the changing of grass-root governance from the RT/RK system to the RT/RW system has gradually changed the way in which people participate in urban development, from a dominant self-generated participation to a dominant state-orchestrated participation. Figure 2.9 shows the present position of RT/RW within the local government structure. Subdistrict is by law, the

\(^{10}\) These systems include neighbourhood maintenance, such as solid waste management, security system, social welfare system, and so on.

\(^{11}\) Foucoul (1977:200) uses the term *panopticism* in his work titled *Discipline and punish*, to describe how a system called *panopticon* monitors inmates’ behavior. As he puts it: “They [the cells] are like so many cages, so many small theatres, in which each actor is alone, perfectly individualized and constantly visible. The panoptic mechanism arranges spatial unities that make it possible to see constantly and to recognize immediately”.

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lowest level of government, but the attached RT/RW extends its capacity to control the community.

The reasons for describing the system of local governance in such detail will become apparent through the ways in which the authorisation of RT territories and the construction of associated security post (gardu) and gateway become implicated in the authorisation of informal settlements. The dotted line in Figure 2.9 represents the point at which control shifts from the state to the community. Below the line authority becomes less formal, and leadership is voluntary.

![Figure 2.9 Position of RT/RW within the local government structure (chart created by author based on Soewito, 2007).]

2.3. Kampung

The word *kampung* is frequently mentioned in the preceding sections and in the previous chapters, but what is a *kampung*? The word appeared as early as the 17th century in South East
Asia, which means enclosure or hamlet. This word became the origin of the English term ‘compound’\textsuperscript{12}. In today’s usage, the word *kampung* has many meanings. The main task of this section is to unveil such meanings and explore how they relate to the notion of informal settlement outlined in the previous chapter. It also looks at how they link to the issues of tenure security/insecurity. This section consists of three parts; the first part explores the various definitions of *kampung*; the second part describes the typology of *kampung*, and the third part discusses how state intervention has contributed to the transformation of *kampung* in Yogyakarta.

2.3.1. *Interrogating the definitions*

Many scholars who have tried to define the meaning of Indonesian *kampung* seemed to be challenged by the fact that the *kampung*’s social and physical fabrics continue to evolve. As a result, *kampung* have no single definition, because the definition created is always associated with the period of time in which one observed the settlement. The following is my review of scholars’ views on *kampung* in the diverse urban settings, some of which are beyond the context of urban Yogyakarta.

Sullivan (1986) argues that *kampung* is a Malay term to denote a ‘village’, but in Indonesia the term *kampung* is often associated with settlements in urban areas. Flierenga (cited in Pollé and Hofstee, 1986) writes about the transformation of *desa* (village) into *kampung* in the early 20\textsuperscript{th} century Indonesia. Flierenga notes that the passing of Decentralisation Law by the Dutch Colonial government in 1903 led to the formation of autonomous European urban community, comparable to *gemeente* (municipality) in the Netherlands. However, ‘their jurisdiction did not extent to the villages (desa) of the indigenous people as these were under the jurisdiction of Inlandsche Gemeente’ (quoted in Pollé and Hofstee, 1986:117). Furthermore, Flierenga writes that the migration of the indigenous people in the first quarter of the 20\textsuperscript{th} century had changed both the urban and rural environment. As Flierenga puts it (quoted in Pollé and Hofstee, 1986:117):

These Inlandsche Gemeenten are not anymore called desa [village], but kampung [Dutch: kamp, English: camp]; the difference is that a kampung, in contrast to a desa, has

\textsuperscript{12} Quoted from Apple electronic dictionary 2007.
no links or hardly any with agricultural land but the land is almost entirely used for residential purposes. The city kampung are mixed neighbourhoods for impoverished Europeans (this category includes descendants of male Europeans and indigenous women), foreign orientals and indigenous people. The desa association is almost completely lost; as a corporation the kampung has retained hardly any significance; the people of the kampung do not bestow much care on the public works so that one finds annoying signs of neglect everywhere.

Sullivan in his earlier study in the late 1970s and 1980s categorises the urban settlements of Indonesia into three types. The first type is a ‘well-planned, well-serviced and equipped, upper-income district’ (Sullivan, 1980:2). The second category is a result of ‘pocket development’, a chaotic arrangement of settlement behind the commercial buildings that congregated along the thoroughfares (p.2). The fabric of this type of settlement ‘varies from ‘permanent’, through ‘semi-permanent’ to decidedly ‘temporary’’ (p.3), and in general this type of settlement is impermeable by cars. The third type is slum, an unplanned settlement situated on unsupervised land. Sullivan sees slums as characterised by predominantly temporary building materials. Dwellers of this type of settlement ‘maintain their marginal, makeshift, temporary appearance, and the communities inhabiting them maintain their essentially marginal, makeshift, temporary lives’ (Sullivan, 1980:3). Thus Sullivan sees slum dwellers as nomadic, and he further argues that generally these settlements are unauthorised, lack proper infrastructures, and are overcrowded.

Within the above three categories, Sullivan puts kampung in the second category - ‘the back alley neighbourhood’ as he calls it and uses these words for the title of his report. His anthropological interest led him to focus on looking at the everyday life of kampung dwellers, through which he discovered the ambiguity when he tried to distinguish ‘non-kampung and kampung groupings along rich/poor, outside/inside, high status/low status axes’ (Sullivan, 1980:12). On such ambiguity, Sullivan writes:

The main problem for me was that not everyone who said they were wong kampung, lived ‘inside’, were poor, under educated, lacking in general social status, and so on; and not everyone who was poor, uneducated, and low on status and influence, identified themselves or were identified by others as kampung people – some of these lived “inside’, some lived ‘outside’. Some very well-off families lived alongside very poor

13 Wong kampung is a Javanese term meaning ‘kampung people’. 
families, deep inside these residential pockets and, according to self-identification and identification by neighbours, a few of these comfortable ‘insiders’ were kampung and others were not (Sullivan, 1980:13).

Whether or not one can be seen as *wong kampung*, according to Sullivan, is not based on the ‘economic or geographic analysis of their place in the world; they were identifying their membership of a particular community’, which was expressed through ‘participation in the affairs of the immediate neighbourhood’ (Sullivan, 1980:13). Thus for Sullivan, the *kampung* is seen as an assemblage of social networks which may not necessary relate to the administrative boundary of a settlement. But besides seeing *kampung* as communities, in his later work, Sullivan (1986) also sees *kampung* as an administrative unit called *Rukun Kampung* (RK),\(^{14}\) which has a definite territorial boundary.

Other relevant work is a longitudinal research project on a riverbank *kampung* in Yogyakarta by Patrick Guinness, who studied kampung Ledok on Codé riverbank for more than two decades, since the 1980s. Part of the Guinness’s earlier research (1986), which provides an understanding of the notion of *kampung* was his observation on social hierarchies among the residents of the above settlement within the neighbourhood administrative division of Yogyakarta. As Guinness (1986:4) writes:

> The division, termed *Rukun Kampung* (RK), includes both urban poor, residing in the *kampung* ‘off street residential area’, and urban elite residing along the streetside. Along the perimeters of this administrative area lie large commercial and private buildings, government offices, hotels, restaurants, numerous shops, and private homes, which are all administratively part of the RK. Behind these impressive streetside buildings lies the *kampung* community of Ledok, covering an area of a seventh of a square kilometre. It lies on the sloping banks of the river, hidden completely from the streets that ring it on three sides.

The above quotation shows a similarity to the description of *kampung* by Sullivan (1980). Both Sullivan and Guinness see the *kampung* as part of the state-engineered administrative territory (RK), which has morphological qualities, as distinct from the well-off *non-kampung* settlement within the same RK. This well-off housing obscures the visibility of *kampung* from the main thoroughfares. But within the *kampung* itself

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\(^{14}\) Sullivan early works (1980 and 1986) do not cover the discussion on RT/RW, as they were published prior to the implementation of such a grass-root governance system in Yogyakarta.
residents’ economic and social backgrounds vary. Affluent residents mix with the less fortunate and subalterns in the same territory (Sullivan, 1980; Guinness, 1986). Guinness research shows that the distinction between the kampung and the street side residents (in the 1970s) was clearly expressed in the built forms, a distinction that increased over time. As Guinness puts it:

These streetside properties, whether private residences or business premises, face onto the main street, and away from the kampung, from which they are isolated by high garden walls or the windowless back wall of the buildings. Doors through these walls to the kampung behind, indicating more frequent contact and greater trust between streetside and kampung dwellers in the past, are now permanently locked and barred, and in some cases bricked in (Guinness, 1986:22).

While Sullivan and Guinness focused their research on Yogyakarta, a number of other scholars conducted similar research on kampung in different urban contexts. Lea Jellinek who studied kampung Kebun Kacang (Peanut Garden) in Jakarta, found that in the early 1980s, the social cohesion among kampung dwellers was at its weakest point as compared to when the kampung was first initiated in early 20th century, when the kampung was under the threat of the Japanese occupation, or during the uncertain political situation in the early times of independence (Jellinek, 1991). Kampung Kebun Kacang was first inhabited in the 1930s, which witnesses at the time called ‘zaman normal (normal times)’ (Jellinek, 1991:19), when people tended to help each other to survive in the hard life under colonial occupation. However, as many residents gained more prosperity in the 1980s, and threats to everyday life were not significant, people began to live more individualistically. Jellinek further noted that some moved out to the better residential places. As a result, the decreasing population due to outmigration weakened the vulnerable social cohesion within the remaining residents.

Jellinek’s work shows that a common threat to a community (such as the harsh life in the pre-independence, and the economic and political uncertainty in the days of early independence) could strengthen the community cohesion, and maintained the existence of a kampung. A similar situation can be seen in the work of Winayanti and
Lang (2004), who studied *kampung* Penas Tanggul in Jakarta. This *kampung* was formed in the 1970s through squatting by migrants of farmers who built makeshift settlements on a piece of *tanah garapan* (farming land) on the banks of the Cipinang River. Since the land was under state control, the tenure status of these migrants was illegal. As a result, their common threat was market-driven eviction, which they had experienced several times before), while the Subdistrict government (*kelurahan*) kept rejecting their application for an RT status.

However, after the collapse of the New Order government in 1998, the residents received the RT recognition and also a KTP (*Kartu Tanda Penduduk* – Resident’s ID Card) as well, despite their occupation on the state land remaining illegal (Winayanti and Lang, 2004). The story of *kampung* Penas Tanggul shows the shift of the development paradigm during the early times of post Suharto regime.

Evers and Korff (2000) in a study of *kampung* in Malaysia, reveal a similarity in the patterns of the built environment between Malay *kampung* and Javanese *kampung*. Using the classic work of Kevin Lynch (1960) as a reference point, Evers and Korff (2000:111) describe the typical complexity of a *kampung* as follows:

Upon entering Malay rural or urban kampong (village) one is faced with the problem of orientation. There is usually no main street, no plaza or main square, but only an apparently arbitrary system of winding footpaths leading from house to house, becoming narrower at times of ending in blind alleys. There appears to be no clear pattern, no “readability” of the urban or rural scene, which according to Kevin Lynch’s well-known study, “The Image of the City”, is so important for the image of a town or settlement (Lynch 1960).

Such complexity also occurs in the description of *kampung* in the work of Funo (cited in Funo, Yamamoto, and Silas, 2002), which describes the *kampung* as a heterogeneous community. As Funo puts it:

Rich people used to live next to poor people. Complexity of inhabitants is a characteristic of kampong. It is sure that people from the same region tend to live in the same area, but relationships between different groups are not always exclusive. It should be noticed that rich people support the life of poor even in the

Funo’s description quoted above confirms what Sullivan (1980; 1986) and Guinness (1986) have described earlier in this section about the notion of *kampung*, which suggests that *kampung* can be regarded as informal settlements having hybrid characteristics. By this I mean that *kampung* cannot be simply seen as an unauthorised or illegal settlement, because most of them are at least administered within the formal RT/RW systems, regardless of their unauthorised tenure status. *Kampung* also accommodate a mixture of residents with diverse socio-economic backgrounds, meaning they have to interact with each other in making collective decisions about how they manage their living environment. For the Javanese, *kampung* are ‘primarily something akin to ‘home community’ while the better-off and more genteel minority would tend to interpret it more decisively as ‘slum” (Sullivan, 1992:20).

However, Johan Silas, a prominent Indonesian housing expert, argues that *kampung* is not a slum nor a squatter settlement, but a settlement that emerge as a result of incremental yet continuous housing development through self-help approach. This type of settlement usually built on traditionally owned land, using traditional construction methods (cited in Kenworthy, 1997).

In sum, the above review explains the multiplicity of meanings of *kampung*, which generally rests on two frameworks: physical (built environment) and non-physical (social, economical, and political constructs). Within the physical or morphological framework, *kampung* represents a haphazard built environment, a result of gradual and non-rational planning and design carried out mostly by the residents, which mixes slum with non-slum housing, and is continuously changing. Within the non-physical domain, *kampung* accommodate social hierarchy between *wong kampung* (*kampung* people - the low income groups and the subaltern), and those who see themselves as the well-off residents who refuse to call themselves *wong kampung*. The following section discusses further the physical domain of *kampung* in Yogyakarta.
2.3.2. *Typomorphology of kampung in Yogyakarta*

This section examines the typomorphology of *kampung* in Yogyakarta in two dimensions: locations of settlement and characteristics of the built form.

*Locations of kampung*

There are six typical locations of kampung in Yogyakarta, which some of them appear similar to the typical locations of global informal settlements discussed earlier (Chapter 1). The first and most favourable location of *kampung* in Yogyakarta, as shown in the work of Guinness (1986; 2009) and Setiawan (1998), is the waterfront. Within this category, Guinness (1986) identified two locations of the land along the river commonly invaded by the squatters that later led to a proliferation of *kampung*: riverbank and riverflat (Figure 2.11).

![Figure 2.10 Typical anatomy of major rivers in the city of Yogyakarta (based on Guinness, 1986; Setiawan, 1998; and self observation)](image)

Riverbank or *ledok* in Javanese is the sloping area along the river, while riverflat\(^{15}\) is actually a flat sandbank (*wedhikengser* in Javanese) that directly touches the water’s edge (Figure 2.10 and 2.11 Right). The main reason for choosing these areas for building houses is the close proximity to water (despite the proneness to flooding) and the

\(^{15}\)The term ‘riverflat’ (*wedhikengser*) was used by Guinness (1986) in his research on *kampung* Ledok, and was also used by Setiawan (1998) in his research on several riverbank kampung in Yogyakarta. *Wedhikengser* is a Javanese term meaning ‘washed sand’, which denotes an area of land along the waterfront of rivers, seas, and lakes that occasionally disappears because of high tide or flooding.
ambiguous tenure status of land on both the riverbank and riverflat, which opens possibilities for informal property speculation.

The second typical location is along the railway lines that cut across the east-west axis of the city (Figure 2.11 Left), while the third location is along the inner part of the fortress (benteng) of the Sultan’s palace where residents built their houses attached to the fortress wall, treating the fortress as part of enclosures of their houses.

Figure 2.11 Left: an example of a makeshift house in a kampung Badran, near a railway line in west Yogyakarta. Right: settlements on a riverflat (picture credit: YPR, 2006).

Some kampung in Yogyakarta emerged as a result of cemetery squatting, such as the extension of kampung Blimbingsari, which was initiated through the subdivision of land of the old Chinese cemetery located along the Codé River. Dwellers of this part of Blimbingsari16 invaded the cemetery to find job opportunities in the city, and also to get a closer proximity to their work places (Garr, 1996 and personal observation). Cemetery squatting at kampung Blimbingsari was not carried out within the buildings, as most of the tombs existed in an open-air graveyard. Thus while squatters tried to use land between the tombs for building their houses, it was not uncommon to see the tombs exist inside the house, as the densely populated cemetery left sparse gaps for these squatters to construct their houses.

16 The larger part of Blimbingsari is a formal kampung (Garr, 1996).
The fifth location is abandoned buildings. One rare example is my case study at *kampung* Tungkak. This settlement emerged as a result of invasion of the abandoned government’s buildings, which used to be a homeless accommodation and training facilities.

Another location is the inner city blocks (district). *Kampung* emerges on this location are usually fairly large, and existed as a result of urban planning in the pre-independence times. *Kampung* Kauman (Figure 2.12) in the CBD and *kampung* Bumen in the District of Kotagede (the old town of Yogyakarta) are examples. These *kampung* are often called ‘traditional *kampung*,’ as they have existed since the colonial times. While they were developed outside the state planning, the lands on which they are located have mostly been authorised.

![Figure 2.12](image)

*Figure 2.12* A gate of *kampung* Kauman in Yogyakarta CBD (photo credit: Syafril Nusyirwan, 2010).

*Characteristics of the built environment*

*Kampung* in Yogyakarta and elsewhere in Indonesia occur in haphazard arrangements of built forms and open spaces, often referred to as being the result of unplanned development. However, Evers and Korff (2000) reject such a notion. As they put it:
The difference between the neatly zoned business district or upper-class and the rest of the city is that the former is planned by architects, city-planners and other government agencies, whereas life in the slum is based on the planning and strategic action of the slum-dwellers themselves (Evers and Korff, 2000:153).

‘Planning and strategic action’ quoted above often occurs in the form of self-adaptation to the environmental and tenure challenges amidst limited resources and poverty. As a result, the built environment is highly heterogeneous. In terms of building construction materials, there are three categories widely used by the locals, as exemplified in Figure 2.13: gedhek (temporary material: makeshift or bamboo mats), kotangan (semi permanent: half brick half bamboo), and gedhong (permanent: brick and concrete).

The community gate and security post (gardu) are the public built forms most typically found in the kampung. The presence of the gates and security posts are usually the result of a collective decision-making process among the kampung dwellers (see Murti, 2004). Other built forms resulting from such collective decisions and commonly found in mature kampungs are religious buildings (mosques and churches), gathering halls, public bathrooms (including toilets), and sports facilities. These built forms and public spaces are often constructed with partial assistance from the government, NGOs, and other external entities, which indicates the presence of ‘formal’ elements in kampung’s built environment.

![Figure 2.13 Left: an example of a gedhek (makeshift/bamboo) house of a scavenger family co-existing with gedhong (brick/concrete) houses (picture credit: author, 2008). Right: kotangan (half brick half bamboo) houses (picture credit: Muklas Setiawan, 2007).](image)

### 2.3.3. State roles in kampung development

The previous sections suggest that kampung and state relationships are complex, and the built
form provides avenues to understand such complexity. Transformation of kampung through the appropriation of built environment has been used as one of the state’s main strategies in influencing kampung development since the colonial era. Kusno (2000) argues that ‘pacification’ was a ‘preferred alternative’ for the colonial government to ‘tame’ the indigenous urban dwellers, which as I have noted earlier, were deliberately segregated during colonial urban planning. Such appropriation, as Kusno (2000:129) says, was done through ‘technical surgery to improve the physical environment to obtain a healthier and a more disciplined and orderly-looking landscape.’ Kampung Improvement Program (KIP) implemented in the major cities of Indonesia is a widely known example of such an approach.

The genesis of KIP can be traced back in the early 20th century, when the colonial government initiated infrastructure improvement on urban kampung in the 12 major cities in Indonesia, such as in Semarang (Kerchman, 1930 cited in Pollé and Hofstee, 1986). The ‘post-colonial’ KIP was implemented extensively in Jakarta beginning in 1969, covered a total area of 7,200 Hectares17, but still maintained its focus on infrastructure development (Holod and Rastorfer, 1983). Most recent KIP implemented in Surabaya, known as Comprehensive KIP (C-KIP), was operated in 27 kampung between 1997 and 2002 (Dhakal, 2002). The term ‘comprehensive’ implies a wider scope of program than the previous infrastructure-focused KIP model. Dhakal (2002) further notes that apart from infrastructure improvement, the C-KIP also included improvement of community’s social-economic capacity, for example through the introduction of revolving fund program. In both early KIP and C-KIP models, residents were responsible for improving their own houses.

In the context of urban Yogyakarta, Guinness’ (2009) research findings in kampung Ledok led him to frame such state-kampung relationships within the keywords of ‘formalisation’ and ‘informalisation’, which characterises the way in which the kampung is developed and maintained. Similar to what I have outlined in Chapter 2, ‘formalisation’ in Guinness’ case explains the development of activities that link to the state-operated system, while ‘informalisation’ denotes development of activities beyond the control or knowledge of the state. Using these two notions, I present some analyses of typical components in a kampung’s

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17 According to Holod and Rastorfer (1983), KIP was a response to the fact that in the late 1960s, approximately 75 percent of the total Jakarta population lived in kampung.
built environment that can be seen as an entry point for the state’s presence. Based on the field observations, these typical components can be identified as electricity, water and sanitation, streets and public spaces. But as I have discussed in Chapter 1, I view the term ‘formalisation’ and ‘informalisation’ not as a dichotomy, rather as a continuum.

**Electricity**
As seen in the global informal settlements, both authorised and unauthorised connection characterises the practice of electricity supply in urban kampung of Indonesia. The authorised way to obtain the electricity connection in all cities of Indonesia is from the PLN (Perusahaan Listrik Negara – State Electricity Company). One who wants to get authorised electricity connection must meet the following requirements set out by the PLN (in translation)¹⁸:

1. Complete the application form.

2. Submit the filled application form to the nearest PLN office along with a copy of KTP (Kartu Tanda Penduduk – Resident ID Card) and a copy of an electricity bill obtained from the nearest neighbour. If the bill is not available, the applicant can substitute it with a map showing the location of the applicant’s house.

3. Upon receiving the application, PLN will then conduct a technical survey to determine the availability of the existing electricity network near the applicant’s house, in addition to the availability of materials required for the installation.

4. The survey (no. 3) is used as a basis for making the decision as to whether PLN will immediately grant the approval or postpone it.

These requirements show no relation to the applicant’s residential tenure, as PLN does not ask the applicant to provide any documents relating to applicant’s land and housing status. The only formal document that indicates the applicant’s residential identity is KTP, which can be obtained from the District office after the approvals from RT/RW chiefs and the Subdistrict head. In other words, as Winayanti and Lang (2004) have pointed out, KTP is an important document that demonstrates one’s rights for housing, albeit without formal tenure. KTP can only be issued for one who lives within the formal administrative territory (RT/RW).

¹⁸ Based on the requirements displayed on a notice board in PLN of Yogyakarta Branch, January 2008.
which implies that, as long as the applicant presents a valid ID and pays the installation fee, his or her application will be approved. However, unauthorised electricity connection has long been seen as an option in kampung development as well. Guinness (2009) also found such informal electricity sharing occurred in kampung Ledok. The PLN is, of course, aware of such unauthorised practice, as often seen in the occasional warning issued by PLN to the public.

Water and sanitation
Water supply is relatively easy to obtain in most parts of urban Yogyakarta, albeit of a non-standard quality. While piped formal water supply is provided by the PDAM (Perusahaan Daerah Air Minum – Municipal Drinking Water Company)\(^\text{19}\), people often build private or public wells or simply draw water from the river. The latter practices, especially the construction of private wells, occurs not only in the kampung but is also commonly sighted in the middle-income or even high-income (formal) housing\(^\text{20}\). The construction of private wells, therefore, cannot be deemed as having the same degree of informality as the unauthorised tapping of electricity. In fact, many kampung improvement initiatives involving the state and international entities often saw the construction of a public well and bathroom as one of the entry points to carry out the program, because lack of clean water supply and unhygienic sanitation are regarded as key problems in slums.

In recent years, infrastructure improvement programs in kampung have been carried out under the umbrella of NUSSP (Neighbourhood Upgrading and Shelter Sector Project), a national program administered by the Ministry of Public Works (Departemen Pekerjaan Umum – DPU), implemented in 32 cities in Indonesia including Yogyakarta. The program is aimed at achieving the UN vision of ‘cities without slums’ (DPU, 2006). Such an ADB\(^\text{21}\)(loan) financed project was implemented at various kampung. Other recent state-sponsored infrastructure upgrading is administered under the P2KP (Program Pengentasan Kemiskinan Perkotaan – Urban Poverty Alleviation Program), which has been administered by the Ministry of Public Work as well (DPU,\n
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\(^\text{19}\) The words *Air Minum* (Drinking Water) should not be confused with ‘drinkable water’, as the water supplied by PDAM is not drink-ready. Boiling the water obtained from PDAM or any water sources (other than bottled mineral water) before consuming them continues to be a norm.

\(^\text{20}\) This explains that PDAM lacks capacity to cater the whole population of Yogyakarta.

\(^\text{21}\) ADB stands for Asian Development Bank.
2009). These programs represent various state sponsored infrastructure constructions in the unauthorised *kampung* in Indonesia, a movement that could lead to the attainment of *de facto* secure tenure according to UN definition (Chapter 1), because the land status of the targeted settlements usually is not part of the program requirements.

With regard to the piped water supply operated by PDAM, the requirements are different from those needed for an electricity connection. While a land certificate is not required for obtaining the electricity connection, this document is mandatory for the application of piped water connection, although field observations show that water meters have been installed in unauthorised properties as well.

![Figure 2.14 Retaining wall along the Codé river (picture credit: Yoshi Murti, 2000).](image)

The anatomy of rivers in Yogyakarta is typically characterised by a deep slope (called *ledok*) that creates about 5-10 metres gaps between the water surface and the flat land above (Figures 2.10). Such gaps have been the target of invasion by squatters and have resulted in the proliferation of riverbank *kampungs*, which has precipitated the chance of dangerous landslides. To prevent such danger and to stop the continuation of encroachment, the government has built retaining walls (Figure 2.14) lining the river within the high-density urban areas, despite criticism from environmentalists that such retaining walls could damage the natural
environment and the fish habitats\textsuperscript{22} along the river. Interestingly, the retaining wall has stimulated a change of housing orientation towards the river in some parts where waterfront paths were constructed. Such change suggests that residents have gradually treated the river as a waterfront rather than a backyard and rubbish-dumping site.

However, Guinness (2009) reported that the above retaining wall project was aimed at winning ‘the Indonesian Beautiful City (Kota Adipura) award’ and the project ‘was awarded to contractors who had the formal requirements to tender for such work’, and residents could only watch this top-down project (Guinness, 2009:87). Nevertheless, the implementation of this project did not involve any displacement of kampung dwellers along this river. In fact, the retaining walls have stimulated the construction of permanent streets and lanes along this river, which increased the permeability to the numerous kampung previously hidden from the public gaze.

\textit{Streets and public spaces}

Streets, lanes, and public spaces are other typical components in the kampung’s built environment where the state has often intervened. The form of intervention varies from semi top-down to sweat equity. Semi top-down means that the community participated in the decision-making process, but the state appointed contractors to carry out the construction instead of assigning residents to do the task. Programs like P2KP and NUSSP outlined above adopt this mechanism.

Sweat equity is a sharing of the burden between the state and the community. In this practice the state usually provides the so-called \textit{dana stimulan} (stimulus funds), while the community pays the rest of the cost, including to some extent carrying out the construction tasks. In some cases, construction of lanes and public facilities were fully funded by the state, while the community was responsible for managing the construction carried out by the contractors (Figure 2.15 Left). The amount of stimulus funds is often much smaller than the money and labour contributed by the community. However, regardless of the ‘unequal’ equity between the state and the kampung in such collaborations, the projects are authorised by the

\footnotesize{\textsuperscript{22} Based on interview with an RW chief in Tungkak.}
state. In other words, while the built forms are authorised or formal, the informal status of the lands underneath these built forms is often ‘ignored’.

The state influence in *kampung* development can thus be read from the construction of built form. In Guinness’ (2009) term, the presence of the state in the construction of the built form can be regarded as a ‘formalisation’ of the unauthorised built environment (see also Mitlin, 2001:385). This is not the same as the legalisation of tenure status (land certification) recently carried out by BPN (*Badan Pertanahan Nasional* – National Land Agency) in various *kampungs* of Yogyakarta. Referring to what Guinness (2009) has defined earlier in this chapter; formalisation of the built environment involves the state authorised process, from plan to implementation. The infrastructure upgrading through NUSSP and P2KP for example can be regarded as state-engineered community-based development projects. Unlike the predominantly top-down approach adopted by Soeharto’s New Order regime (from the 1970s to the late 1990s), the current practices of urban slum upgrading reflect the state’s adoption of an enabling strategy, which views the community as the main actor (subject) in the development. Since the legality of land tenure is mostly ignored in the requirements of upgrading projects (e.g. Departemen Pekerjaan Umum, 2006 and 2009), many unauthorised *kampung* could be included in such projects.

![Figure 2.15](https://example.com/image)

**Figure 2.15** Left: pavement installation on a lane. Right: newly constructed public sport facility (photo credits: Muklas Setiawan, 2007).

In conclusion, I argue that *kampung* in Indonesia (particularly in Yogyakarta) cannot be simply seen as having the same notion of informality to that of Brazilian *favela* (e.g. Perlman,
1976 and 2004), Venezuelan barrios (e.g. Brillembourg et al, 2005), slums in India (e.g. Jacobson, 2007; Mehta, 2004; Neuwirth, 2006), or informal settlements in Africa (e.g. Huchzermeier and Karam, 2006), where observers tend to distinguish the difference of such settlements from the ‘planned’ ones, by relating the haphazard characteristics of the built environment with the status of the land. In the case of kampung development, while one might be able to distinguish the well-off/poor or formal/informal residents by looking at the quality of their houses and the status of their property, these groups of people are not segregated in the sense that there is a neighbourhood governance system (the RT/RW) that links them. Kampung should therefore be seen as an assemblage consisting of linkages between socio-economic, spatial, and political networks, which may influence the way in which the residents acquire and improve their tenure.

2.4. Land tenure

Prior to the discussion of tenure issues at kampung level, it is pertinent to have an understanding of the land tenure system operating in Indonesia. This section extends the discussions on tenure outlined in Chapter 1, but looks specifically at the Indonesian context, with special reference to Yogyakarta. The first part of this section briefly discusses the Basic Agrarian Law (BAL), the foundation of land law in Indonesia. The second part discusses the co-existence of adat (customary) tenure system in Yogyakarta. And the third part looks at how these systems influence the land-housing-resident relationships.

2.4.1. Overview of the Basic Agrarian Law

Struyk et al (1990) suggest that the Basic Agrarian Law (BAL)\(^\text{23}\) is a prerequisite for all discussions about Indonesian land law. This section is not intended to provide a detailed analysis of the BAL rather it is aimed at reviewing some articles within the BAL that are relevant to this research. To begin with, the early independence of Indonesia saw the continuing existence of the colonial agrarian law, often referred to as the Western Law, which was ‘derived from the 18\(^\text{th}\) century French Civil Code’ (Struyk et al, 1990:119). Under Soekarno’s administration, the government

\(^\text{23}\) The Indonesian term for BAL is Undang Undang Pokok Agraria (UUPA).
saw such a law as incompatible with the needs of the indigenous people of Indonesia, because the *adat* (customary) law was not accommodated. The exclusion of customary law from the Western Law resulted in a dualism of land law in Indonesia at the time (Kunto and Esti, 2007). To overcome such problems, the government issued the Act (*Undang Undang*) No.5 in 1960 on BAL.

*Table 2.3.* Frequently occurred land rights in Indonesia based on BAL
(Table created by author, based on Struyk et al, 1990; Wright, 2001; Kunto and Esti, 2007)

<table>
<thead>
<tr>
<th>Titles</th>
<th>Description</th>
</tr>
</thead>
</table>
| Right of Ownership (*Hak Milik*) (*)        | • Granted exclusively to Indonesian citizen (including corporate bodies). Foreign citizens and Indonesian citizens holding foreign citizenships cannot have this right  
• Has no time limit  
• Registered through certification issued by the National Land Agency (BPN)  
• Can be used as collateral  
• Can be nullified (by the state) if the land:  
  o vanishes  
  o is needed for public purposes  
  o is abandoned, and/or transferred directly or indirectly to a foreigner or to an Indonesian citizen holding foreign citizenship (in this case the control of the land will fall to the state) |
| Right of Building (*Hak Guna Bangunan*) (*) | • Same as the Right of Ownership except that the Right of Building has a duration for up to 30 years, but can be extended for up to 20 years depending upon the condition and of the future need to use the building |
| Right of Use (*Hak Pakai*) (*)              | • Granted to Indonesian citizen (including corporate bodies). Foreign citizens and Indonesian citizens holding foreign citizenships cannot have this right  
• Cannot be used as collateral  
• Granted for the purpose of using and/or collecting produce from land controlled by the state or owned by an individual  
• Might be used for free or for any kind of services |
| Right of Lease (*Hak Sewo*) (***)           | • Occur between property owner and renter  
• Granted to either Indonesian citizen or foreigner |

Notes:
(*) Referred to as primary rights (granted by the state)
(**) Referred to as secondary rights (granted by property owner)
The BAL gives the state the Right to Control (Hak Menguasai) of ‘earth, water, and airspace’, as stated in the following article 2 (1-2) of BAL (in translation by Wright, 2001):

(1) On the basis of the provisions contained in Article 33 paragraph 3 of the Constitution and of the matters referred to in Article 1 of this Act, the earth, water, and airspace, including the natural resources contained therein, are at the highest hierarchical level controlled by the State in its capacity as the whole people’s organisation of powers.

(2) The State’s right of control as referred to in paragraph (1) of this Article confers the authority:
   a. to regulate and administer the allocation, use, supply, and maintenance of the earth, water, and airspace;
   b. to determine and regulate legal relationships between people and the earth, water, and airspace;
   c. to determine and regulate legal relationships among people as well as legal acts concerning the earth, water, and airspace.

According to Struyk et al (1990:120), Right to Control given to the state ‘is not the same as the state owning all the land’. This implies that the state is prohibited to sell the land to anyone24. Furthermore, the state’s Right to Control is not ‘the same as in the western law where the state must justify its regulation of land on the basis of a legal theory such as the “police power,” and where the applicability of such theory is always open to judicial challenge by dissatisfied land owners’ (Struyk et al, 1990:120).

The Right to Control allows the state to grant various forms of land rights to individual and formal bodies. The discussion in this section is focussed on the rights most frequently occurring in urban settlements (kampung in particular), that is, right of ownership, right of building, right of use, and right of lease, as depicted in Table 2.3. The table shows that Right of Ownership ‘is the strongest and fullest right on land which one can hold’ and it is inheritable and transferable to other hands (BAL, Article 20). However, the state ‘retains the right to regulate the use of land in accordance with any authorised regional or local development’ (BAL Article 14, cited in Struyk et al, 1990:121). City master plan is one example of the instruments used to control the use of land for urban settlements development.

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24 Based on an interview with a land expert during the fieldwork in Yogyakarta, January 2008. The notion that the state is prohibited to sell the land is an implication of article 33 of the 1945 Constitution, which states that the earth, water, and airspace are controlled by the state and shall be exploited to the greatest benefit of people.
2.4.2. Adat (customary) law: the Yogyakarta case

As was previously stated, the ultimate objective of BAL is to incorporate the *adat* law previously excluded in the colonial version of land law. However, unlike the carefully written and static colonial law ‘*adat* law can be characterized as local, unwritten, and dynamic’ (Struyk et al, 1990:123). In other words, *adat* law has no record and is strongly bounded to local issues, including a resident’s personal status, which can lead to an imprecise interpretation of such law particularly for an outsider. Such imprecision is also largely because the law is ‘in a constant process of evolution’, thus it is difficult to predict the outcomes (Struyk et al, 1990:123).

While BAL has been implemented for several decades in Indonesia, the dualistic land tenure system continues to exist in Yogyakarta today. This phenomenon can be traced back to 1918, when the colonial land law was still in effect. Land rights in the province of Yogyakarta at the time were governed under a regulation issued by both the Sultan Hamengku Buwono VIII and Paku Alam VII, called *Rijksblaad* (State Gazette) Kasultanan number 16 (1918) and *Rijksblaad* Pakualaman number 18 (1918) (Suyitno, cited in Kompas, 10 September 2008). This regulation says, ‘All parts of the earth having no proof of ownership under the *eigendom* (the Colonial Land Act) belong to the kingdom of Ngayogyakarta – Pakualaman’26. As a result, after the issuing of *Rijksblaad*, the categorization of land in Yogyakarta became as depicted in Table 2.4.

<table>
<thead>
<tr>
<th>User</th>
<th>Land rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign residents</td>
<td><em>Hak barat</em> (Western Rights)</td>
</tr>
<tr>
<td>Residents of urban Yogyakarta (native)</td>
<td><em>Hak andarbe</em> (Right of Ownership)</td>
</tr>
<tr>
<td>Village residents</td>
<td><em>Hak anganggo</em> (Right of Use)</td>
</tr>
<tr>
<td>Village purpose</td>
<td>Village land</td>
</tr>
<tr>
<td></td>
<td>Sultan lands (Sultan and Pakualaman Grounds)</td>
</tr>
</tbody>
</table>

The above table shows that foreign residents had a special land rights called ‘Western Rights’, which were governed under the colonial law, while the rest were governed by the

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25 Article 5 of the BAL acknowledges the *adat* (customary) land rights, but as Heryani and Grant (2004:14) have argued, the recognition of *adat* ‘has become a critical element of contention in Indonesia. The root of the problem is that most of the existing implementing regulations of the BAL failed to elaborate, and even contradictory to, the *adat* principles’.

kraton (Kingdom of Yogyakarta). However, although Yogyakarta was formally established as a province in 1950, it was not until 1954 that the government of Indonesia issued a legal regulation for managing the land in Yogyakarta. The regulation classified the land in the city of Yogyakarta into four types: land with right of ownership, land under the Western rights, Sultan land27, and municipal land. Although BAL was formally issued in 1960, the implementation of BAL in Yogyakarta was not in effect until the issuance of a Presidential Decree in 198428. Upon the implementation of BAL, all the land rights depicted in Table 2.4 became part of the BAL system except the Sultan land (Suyitno, cited in Kompas, 10 September 2008). However, despite the acknowledgement of such customary lands in BAL, clear rules on how these properties are managed have not yet been established.

Table 2.5 Result of survey on Sultan land (source: compiled from Kompas, 10 September 2008, in translation by author).

<table>
<thead>
<tr>
<th>Municipality/regency</th>
<th>Area identified in the first survey in 1994 (in Hectares)</th>
<th>Area identified in the second survey incrementally conducted until 2005 (in Hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yogyakarta city</td>
<td>80.05</td>
<td>23.05</td>
</tr>
<tr>
<td>Sleman regency</td>
<td>306.16</td>
<td>64.59</td>
</tr>
<tr>
<td>Bantul regency</td>
<td>1,669.75</td>
<td>2,303.06</td>
</tr>
<tr>
<td>Kulon Progo regency</td>
<td>1,037.60</td>
<td>2,701.52</td>
</tr>
<tr>
<td>Gunungkidul regency</td>
<td>581.49</td>
<td>1,305.35</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3675.05</td>
<td>6397.57</td>
</tr>
</tbody>
</table>

While the above decree stated that the Sultan land would be regulated in the future, in fact up until and during the time the present research was conducted, the process of collecting information on the area of Sultan land was still incomplete (Table 2.5). According to an article in Kompas (10 September 2008), there are many residents of Yogyakarta, particularly the low-income groups, who rely on what is known as magersari. Magersari is a Javanese term, literally translated as the act of using one’s land (including state’s land) for cultivation or building. In the BAL system, this mode of land acquisition is similar to Right of Use (Table 2.3), whereby the relationship between landowner and land-user does not always involve payment.

However, in practice, the term magersari is often seen as more linked to the use of

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27 I use the term ‘Sultan land’ to represent both ‘Sultan Ground’ and ‘Paku Alam Ground’ - two terms often used in mixture in the discourses of customary land tenure in Yogyakarta.

28 There is no information as to why the implementation did not take place until 1984.
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Sultan land rather than to commoners’ land, which to some extent relates to the formal system, as stated by KGPH Hadiwinoto, a high rank officer of Kraton Yogyakarta, responsible for managing the kraton’s assets (in translation by author):

Basically the Kraton (Palace) of Yogyakarta is open to anyone who wishes to use the kraton’s (kingdom) lands located in all over the province, provided that the rules are properly followed. People, governments, institutions, and foundations are all welcome to use magersari land. In so doing, they should submit an application to the kraton by filling up the agreement form, followed by a location check. Thereafter we will consult to the municipal or regency governments as to whether the usage purpose fits to the masterplan of the city/regency. If the usage purpose does not fit to the masterplan, we will not grant the permission29 (cited in Kedaulatan Rakyat newspaper, 10 March 2008).

Hadiwinoto described further (in translation by author):

There are no differences between individuals, institutions, governments, and private corporations with regard to the rules of agreement. The [magersari] agreement would normally be valid for up to ten years. Unfortunately thousands of magersari land users have a lack of awareness in the importance of kekancingan. Many of them have no kekancingan letters (cited in Kedaulatan Rakyat newspaper, 10 March 2008).

Kekancingan letter is a document issued by the office of kraton as a proof of permission to use the kingdom land. Sudjito, a land expert from Gadjah Mada University (cited in Kedaulatan Rakyat, 10 March 2008) explained that such a document is extremely important to avoid conflict between land users, and to allow the kraton to control the length of land occupation. Sudjito added that magersari rules are generally clear. For instance, in addition to the above-mentioned rules, the land occupants are not allowed to build a permanent (all brick and concrete) construction. The maximum acceptable level of permanence is ‘semi permanent’ or kotangan (half brick half bamboo) in Javanese. Such a semi-permanent construction is meant to allow for easier and cheaper demolition when the period of occupation ends30. However, in the current practice of magersari, many of the buildings found are permanently constructed.

The latest government survey shows an inconsistency in the total size of the kingdom land area in Yogyakarta city and Sleman regency (Table 2.5), which supports the government’s claim that many magersari residents have tried to hide their land status. Conflict among these

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29 This show, while magersari is a non-state system, kraton links the magersari mechanism to the state planning system.
30 The user is responsible for paying the cost of demolition.
land claimants often occurs because kingdom lands have no formal title. While the palace officially manages these lands, they do not have the formal capacity to control such huge properties.

The hybridity of a *kampung* is reflected not only through the complexity of its built environment and social fabric, but also through the hidden complexity of land tenure. While formal tenure under the BAL system might exist in a *kampung*, a customary land tenure system such as *magersari* often co-exists as well. Besides *magersari* that strongly relates to *kraton*, there is another customary land tenure mechanism called *ngindung*, which is mostly practiced by the commoners. Similar to *magersari*, *ngindung* is a land occupation based on use rights, but it involves payment. Therefore, it seems more appropriate to see it as ‘leasing’ rather than ‘using’, which is comparable to Right of Lease in the BAL (Table 2.3). It also has a similar pattern of landowner-renter relationship to what De Soto (1989) describes as the accretion model (Chapter 1).

Citing the work of Gabriel Sumarjati (1972), Guinness (1986:38-39) describes a typical lease agreement between *pengindung* (land renter under *ngindung* mechanism) and *cangkok* (landlord) as follows (note: I have restructured the original order, beginning with matters more closely related to the built form):

1. The *pengindung* house should not exceed 9 x 11 metres.
2. The *pengindung* may not renovate or change his house, or sell or otherwise transfer it to another without permission of the *cangkok*.
3. The *pengindung* should not repair his house without the cangkok’s approval of the specific repairs planned.
4. The *pengindung*’s house should not be of permanent construction, i.e., brick or stone.
5. The *pengindung* who fails to construct a house on the land within one year of the agreement should forfeit the land.
6. The *pengindung* should maintain the land and paths surrounding his house.
7. The *pengindung* should pay a monthly rent agreed on by himself and the *cangkok*.
8. The *pengindung* may not pick, nor sell, trees or plants of the *cangkok* without permission.
9. No compensation need be paid to the *pengindung* for plants if he should have to move.
10. The *pengindung* must surrender the land to the *cangkok* if required, but can insist on three months’ notice and a third of the value of the house in compensation. In such cases the house remains the property of the *pengindung* who removes it to another
site.

11. The *pengindung* who fails to fulfil his responsibilities, or carries out indecent activities like gambling or prostitution on his premises may be evicted by *cangkok* without compensation.

12. The *pengindung*’s rights to use the land may not be passed on to heirs without the specific agreement of the *cangkok* and the agreement of a new contract.

The above *ngindung* agreement is usually unwritten, reflecting a less formal character compared to that of *magersari*. But it does not mean that the *kraton* has a stronger power to control the land occupants compared with landlord. In fact the greatest problem of unauthorised land occupation so far occurs mostly on *magersari* properties, while the *ngindung* mechanism has been adapted in the BAL system, after its formal implementation in Yogyakarta in the mid 1980s. In 2000, Sultan Hamengku Buwono X the present king of Yogyakarta said (in translation by the author) that ‘the problem of *kraton* [kingdom] land has taken an unhealthy turn. The owner has given in but he often has to sacrifice his dignity along the way’\(^{31}\). If this matter is tolerated, it might mean that lacking respect for others’ rights becomes seen as culturally acceptable’ (quoted in Bernas newspaper, 21 October 2000)\(^{32}\).

The Sultan further argued that without a formal status, *kraton*’s ownership over the Sultan lands is vulnerable (cited in Suara Merdeka newspaper, 1 June 2007). He continuously reminded the central government to give a definite status for these lands, notwithstanding the public awareness about the real owner of these lands. KGPH Hadiwinoto (cited in Kompas, 10 September 2008) stated that if the status of Sultan land is formalised, the position of *kraton* should be the subject (an agency who hold the land rights). This would allow the *kraton* to put the Sultan land on (formal) lease to the public through the Right of Building (Table 2.3). Hadiwinoto continues (in translation), ‘The state could benefit from the granting of Right of Building, because the public will pay to get the land certificate in addition to paying the land tax’. If this imagined future of kingdom land tenure system is accepted, then it reflects a popular

\(^{31}\) The ‘owner’ is referred to as Sultan himself.

\(^{32}\) He referred to as the tendency of people’s ignorance towards the social value of kingdom lands. These people, especially the so-called *wong cilik* (‘little people’ or the subaltern), often see the Sultan and the royal family as protector of the vulnerable (Kusuma, 2008). But nowadays, invasions of kingdom land by large corporations often occur as well, such as the case of kingdom land certification by a large cigarette company (Bernas newspaper, 21 October 2000).
Javanese proverb: *desa mawa cara, negara mawa tata* (village has its ways, kingdom has its rules)\(^{33}\). Village in this proverb can also mean *kampung*, which sees tenure ambiguity as the basis of its survival, while the *kraton* represents an agency of public order. In other words, formalisation of Sultan land could lead to commodification of this huge property in the future, which might threaten the existence of *kampung* dwellers.

2.4.3. Identification of tenure structure

The land tenure systems in Yogyakarta, as I have outlined then are highly confusing, with different rights over land and housing. As a framework for proceeding with this study, I want to propose a typology of tenure situations based on different forms of ownership and use as applied separately to both land and housing. Table 2.6 maps the simple categories of ownership, rental, and use against both the land and the house built upon it. This matrix yields a total of six house/land tenure structures:

a. **Own/Own**: where one has clear ownership of both house and land. This is the ultimate tenure combination that gives the greatest tenure security.

b. **Own/Rent**: where one owns the house but rents the land. *Own/Rent* pattern conforms the rules of *ngindung*, which occurs in both BAL and customary domains, wherein rights of land and housing can be separated\(^{34}\).

c. **Rent/Rent**: where one rents the house/land package from either private or public owners.

d. **Own/Use**: where one owns the house but uses the land without payment (whether authorised or not). This category occurs in BAL system as a ‘Right of Use’ but also under *magersari* system, which allows the grantees to erect buildings on top of the Sultan land, albeit with non-permanent structure. This is also the most common condition of squatter’s housing where land (whether private, Sultan, or state owned) is simply invaded and houses are constructed by the residents (owners).

e. **Rent/Use**: where houses constructed under the Own/Use category (whether formal or informal) are rented out. This form of tenure is also common in squatter’s settlements.

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\(^{33}\) English translation based on Sullivan, 1992:163 (see also Van der Molen, 2006).

\(^{34}\) Based on an interview with a land expert during the fieldwork.
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f. **Use/Use**: where squatters who have no authorisation over house or land occupied an existing dwelling. It is relatively uncommon in Yogyakarta, although it is the most common type of squatters’ housing in formal western cities.

While there is a general decrease in both formality and tenure security from Own/Own to Use/Use, each category can be more or less formal and secure.

**Table 2.6.** Matrix of land-house-resident relationships based on Table 2.3

<table>
<thead>
<tr>
<th>LAND</th>
<th>HOUSE</th>
<th>Own</th>
<th>Rent</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own</td>
<td>Own</td>
<td>Own</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Rent</td>
<td>Own</td>
<td>Rent</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Use</td>
<td>Own</td>
<td>Rent</td>
<td>Use</td>
<td>Use</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
<td>Use</td>
<td>Use</td>
<td>Use</td>
</tr>
</tbody>
</table>
CHAPTER 3

METHODOLOGY AND METHODS

The previous chapters suggest that the emergence of informal settlements cannot be separated from local issues. Such a context-dependent situation, as Flyvberg (2006) argues, can be best approached by means of case study methodology. Yin (2003:13) defines case study as ‘an empirical inquiry that investigates a contemporary phenomenon within its real-life context’. Yin further argues that a case study is an effective means to respond to the ‘how’ question, which characterises the main question of this research.

The task of this research is to analyse the evidence found in the two selected cases: kampung Sidomulyo/Kricak and kampung Tungkak. To this end, I shall note what Yin (2003:109-111) has reminded us that ‘analysing case study evidence is especially difficult because the strategies and techniques have not been well-defined.’ Therefore, Yin suggests researchers to develop what he calls ‘analytic strategy’ that governs the whole process of analysis. Following Yin, the first part of this chapter outlines the conceptual framework, which I use as an analytical toolbox. This ‘box’ contains some ‘tools’- the social theories I consider useful for analysing the findings of this research. The methodology applied in this research might therefore be termed ‘combined strategy’ or a mixed approach, as it integrates several research strategies (Groat and Wang, 2002; Yin, 2003, and Cresswell, 2007).

The second part of this chapter is aimed at describing how the data was collected and structured. It consists of two sections. The first section provides a preliminary background to the chosen case studies and details why these cases were selected. The second section describes the unit of analysis and how each analysis was undertaken. There are six units of analysis, namely historical, tenure, footprint, services and utilities, everyday life, and current changes of the built environment. The third section describes methods of data collection, which consists of five parts: pilot study, archival study, morphological mapping, interviews, and visual (photographic and video) recordings. Empirical data for this research was collected within two stages of fieldwork conducted in Yogyakarta. The first fieldwork period
was conducted from December 2007 to February 2008 (three months), while the second was carried out from September to October 2008 (two months).

3.1. Conceptual framework
This section outlines some social theories that I consider useful as tools for the data analysis. These are environmental game, assemblage theory, ontological security, and non-verbal communication.

3.1.1. Environmental game

We build to endure, to resist time, although we know that ultimately time will win. What previous generations erected for eternity, we demolish. Then with similar intent, we lay stone upon stone and build again. Permanence is instinctively sought (Habraken, 2000:7).

The above quotation from Habraken suggests that a sense of permanence is the ultimate aim of human habitation. Permanence links to ways in which people establish control over the territory they occupy through which the built form plays a primary role. This is not to say that one has to build in order to gain territorial control, rather the built form offers a visible representation of the agents who have the rights of spatial control. A guard does not have to be present near the entry gate of a gated enclave, because the silent gate conveys a message to the public that the gate is an entry point to a residential area. Notices displayed on the gate, such as ‘neighbourhood watch area’, will tell the visitors to behave appropriately.

These three elements: entry gate, enclave, and public behaviour are related yet they constitute the built environment. Referring to Habraken (2000), the entry gate can be regarded as a physical order, while the enclave reflects a territorial order, and public behaviour occurs as a result of common understanding among agents. Therefore, physical order is synonymous to built form, territorial order is the space within which the built form performs control, and understanding among agents are the rules (codes) that govern agents’ behaviour in the built environment and how these agents construct and arrange the built form (Habraken, 2000). Within this tripartite structure, we identify the existence of agents as players in what Habraken calls the environmental game. This concept is useful to understand
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Kampung development as a speculative game that involves the linkage of form, territory, and code.

Kampung development begins with the construction of built form as an instrument to establish control over the claimed territory. With regard to territory, Habraken (2000:128) writes:

Territory is defined by acts of occupation. Form, as such, does not yet come into play. A corresponding space formed by physical parts is not required for territorial space to exist. All that is needed is an agent exercising spatial control.

However, Habraken (2000:19) argues, ‘control does not imply ownership’. The squatters do not own the land, but they perform territorial control with the construction of built form. However, although the squatters are in control of the occupied land, their position as ‘non-owners’ of the land can be implicated in the way in which the built form is appropriated. As Habraken (2000:19) further writes:

In general, an object that is not owned by the agent in control may undergo somewhat different transformation than would occur if it were owned.

Therefore, by examining the morphology of the built form, tenure system that operates in the settlement might be identified.

The process of gaining territorial control is the essence of an environmental game. Unlike in the game of chess, in which each player aims to defeat the opponent to win the game, the environmental game is complex, as it involves many actors that tend to seek stability instead of winning the game (Habraken, 2000). The same author writes further:

Successful environment offer equilibrium, [...] they are structured to avoid situations of imbalance, to ensure stability, while allowing for continuous transformation (Habraken, 2000:26).

Equilibrium therefore implies a situation whereby the form and territory rest in a stable position as a result of the accepted codes. The presence of state control in informal settlements through, for example, providing technical assistance in infrastructure upgrading can be regarded as a form of equilibrium. The assistance could improve the quality of life of the informals, while allowing the state to
establish ‘surveillance’ mechanisms in the legally invisible settlement\(^1\) (Bayat, 2004). In other words, ‘shared codes’ might be established between these unlinked systems.

To achieve equilibrium, actors involved in the game do not have to participate with ‘equal grace or opportunity, at the start or at any other point’ (Habraken, 2000:27). Therefore, some parties might have to suffer more than others, while adjusting and ‘bending’ the rules of the game becomes a common strategy to avoid conflicts and to solve problems (Habraken, 2000:27). Cases of informal development discussed in the previous chapters show that state tolerance could be seen as a form of rules adjustment, from a previously stringent approach to a more flexible one. This adjustment might result in high and unexpected costs for the government’s side, as they might have to provide forms of support not previously planned for. On the other hand, dwellers’ acceptance of relocation - a typical state solution to compensate displacement - could mean a severe impact on their daily cost of living.

In conclusion, Habraken’s concept of environmental game can be useful for analysing how form, territory, and codes interrelated to each other in the development of informal settlement. Territorial claim in informal settlement is a speculative process, involving the risk of displacement. Squatters continuously defend their claimed territory by appropriating the built form, to maintain and stabilise its existence. The game of territorial stabilisation can be understood further through the lens of assemblage theory, which also looks at the dynamism of territoriality from a different angle.

### 3.1.2. Assemblage theory

Assemblage is one of the key concepts in Deleuze and Guattari’s (1987) *A Thousand Plateaus*. My intention here is not to explore the ubiquity of the word ‘assemblage’ in such a challenging and esoteric book; instead I want to primarily use the work of DeLanda (2006) on assemblage theory, which he claims to be an appropriation of the Deleuzean assemblage concept.

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\(^1\) Legally invisible means the systems operate within the informal settlement are largely unconnected with the state legal system (Bayat, 2004).
For Delanda, the assemblage is a whole characterised by the exteriority relations of parts. The exteriority relation suggests that each part is an independent entity, and that the relations of such a part with other parts ‘may be only contingency obligatory’ (p. 11). An example of this (based on Deleuze and Guattari, 1987) is the symbiotic relationship between a wasp and an orchid. The wasp and orchid are both independent, they can be detached from the symbiotic system without affecting the structure and function of either. In other words, the wasp can still do the same task on different flowers, while the flower can also handle the coming of a different wasp, and functions the same. Yet the flower and the wasp are also dependent on other species for their identity.

DeLanda further explains that the relationship between parts within an assemblage follows an intersection of two axes as I have attempted to illustrate in Figure 3.1. One axis (horizontal) represents the relationship between material and expressive components. The vertical axis represents territorialization (and sometimes coding) at one end and deterritorialization (and occasionally decoding) at the other, leading to the stabilisation/destabilisation of assemblage (DeLanda, 2006: 15 and 28).

![Figure 3.1 Assemblage axes (illustration by author based on DeLanda, 2006:12 and 28).](image-url)

As shown by the vertical (dashed) axis, stabilisation will be gained when the parts within the assemblage move towards territorialization. Conversely, the
assemblage is unstable when these parts move in the reverse direction, that is, towards the deterritorialization. Occasionally, coding/decoding influence the way in which an assemblage behaves. Delanda (2006) sees coding occasionally occurs in territorialisation, while decoding occurs in deterritorialization.

Taking the example of the orchid-wasp symbiotic system discussed above, the material parts of the orchid are, for example, petal and stigmatic surfaces, while the expressive parts are their colours, shapes, sizes, and perhaps smells. Material and expressive roles are integrated in one body, while coding is a rule that governs the existence and characteristics of parts and whole (DeLanda, 2006).

In the context of informal settlements development, the nexus between territorialization (and coding) and desterritorialization (and decoding) can be seen as a source for the claim that a settlement is deemed ‘informal’. The term ‘informal’ denotes a form of development outside the state’s prescribed codes. Brillembourg et al (2005) see such decoding resulting in ‘no code’ development, but I argue that ‘no code’ does not mean that the code is void. Self-developed codes always occur in informal development, and one of the tasks of this research is to identify them.

I shall return to the term ‘exteriority relationship’ outlined above. This term, according to DeLanda (2006), differentiates the distinct characteristic of the Deleuzean assemblage concept from the conventional notion of parts-whole nexus. While each part within the Deleuzean assemblage is independent and follows contingency relationships with other parts, it also follows what DeLanda calls ‘relations of interiority’ (p.9). Within such relation, ‘the component parts are constituted by the very relations they have to other parts in the whole. A part detached from such a whole ceases to be what it is, since being this particular part is one of its constitutive properties’ (p.9). While informal development operates outside the state law, it is not entirely detached from the formal systems, and in many cases is a product of them.

Territorialization/deterritorialization² is another key concept coined in the seminal work of Deleuze and Guattari (1987), which has been adopted and

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² While I use ‘s’ instead of ‘z’ in spelling words like ‘stabilisation/destabilisation’, in spelling ‘territorialization/deterritorialization, I use ‘z’ to maintain the original spelling of the words in the work of Deleuze and Guattari (1987).
redeveloped widely in various field, but is almost non-existent in the research of urban informality. DeLanda (2006:13) makes it clear that ‘processes of territorialization are processes that define or sharpen the spatial boundary of actual territories’.

In other words, Deleuze and Guattari’s concept of territorialization/deterritorialization explains how ‘social and spatial boundaries and identities are inscribed and erased’ (Dovey, 2010:17). Within the Deleuzean epistemology I see the nexus of territorialization/deterritorialization is oscillatory instead of dichotomy, as the territory is subject to deterritorialization, and the deterritorialized territory is subject to reterritorialization, and so on. Simply said, deterritorialization is like ‘the process of leaving home, of altering your habits, of learning new tricks’ (Bonta and Protevi, 2004:78), while reterritorialization is ‘the process of forming a new territory, following (and always together with) deterritorialization’ (Bonta and Protevi, 2004:136).

In the context of urban development, DeLanda (2006) writes about the phenomenon of ‘boundary sharpening’, which he regards it as a form of territorialization. It may occur for example through segregation of commercial and industrial areas. Segregation, as DeLanda (2006) writes, sharpens the space demarcation between different social entities. But DeLanda reminds us, while sharpening the boundaries gives a territorializing effect to the entities, the changing of geographical mobility and land values (including land use patterns) might give a deterritorializing effect to the environment.

Therefore, the phenomena of territorialization, deterritorialization, and reterritorialization follow a repetitive loop structure whereby territorialization is subject to deterritorialization, while deterritorialization is subject to reterritorialization, and so on. These processes of territorialization/deterritorialization/reterritorialization are undoubtedly related to the framework of formality/informality. Territorialization is a process of formalization, a formal inscription of identity as territory. Deterritorialization is a kind of de-formalization, a removal of formal identity, and reterritorialization is in turn a re-formalization of identity.
Another key distinction for Deleuze and Guattari (1987) is that between ‘tree-like’ thinking, which is juxtaposed with a ‘rhizomic’ thinking. Deleuze and Guattari offer several models to explain these notions, one of them is called *principles of connection*, which says:

...any point of a rhizome can be connected to anything other, and must be. This is very different from the tree or root, which plots a point, fixes an order (Deleuze and Guattari, 1987:7).

In the above model Deleuze and Guattari describe that the connections between points in the tree or root are fixed and clear, while the rhizome has fluidity and flexibility of connection within its structure. Master Plans and building codes of a city have a tree-like structure. By contrast, informal settlements emerge and evolve through rhizomic informal codes and informal urbanism.

Another model to clarify the notion of tree/rhizome, is called *principles of cartography*, which distinguishes the map from the tracing:

Make a map, not a tracing. The orchid does not reproduce the tracing of the wasp; it forms a map with the wasp, in a rhizome. What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real. The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious (Deleuze and Guattari, 1987:12).

Mapping thus represents a ‘rhizome-like thinking’, while tracing represents a ‘tree-like’ thinking. Mapping discovers something new, while tracing reproduces the existing order. Deleuze and Guattari (1987:21) further summarize the characteristics of a rhizome:

...unlike trees or their roots, the rhizome connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play very different regimes of signs, and even nonsigns states.

The value of the concept of the rhizome to this study lies in the oppositional metaphor of the rhizome/tree. Within the Deleuzean epistemology, tree-like thinking and tree-like processes are top-down and hierarchical where parts are branches of an organized whole which can be understood and changed from above. Rhizomic thinking and rhizomic processes refer to bottom-up and laterally connected networks of local adaptation – the rhizome operates within the gap or crack of a
more tree-like formal system. This rhizome/tree conceptual framework resonates with the conception of informality/formality that frames this thesis to some extent.

The distinction between the rhizome and tree resonate with another distinction between smooth and striated space. Smooth space is rhizomic and nomadic contrasted with the sedentary ‘space instituted by the state apparatus’ (Deleuze and Guattari, 1987:474). Striated and smooth spaces have always occurred in a mixture. The same authors continue:

...smooth space is constantly being translated, transversed into a striated space; striated space is constantly being reversed, returned to a smooth space. In the first case, one organizes even the desert; in the second, the desert gains and grows; and the two can happen simultaneously. But the de facto mixes do not preclude a de jure, or abstract, distinction between the two spaces (Deleuze and Guattari, 1987:474-475).

The above quotation suggests that striated/smooth spaces are produced through a mixture of tree-like and rhizomic processes. Striated space is characterised by tree-like features, while rhizomic character embody the making of smooth space. Yet these spaces are not necessarily tangible. The notion of striated/smooth spaces is useful to see how formal/informal systems resonate to each other, and how such relationship is implicated in the continuity and change of the built environment. The formal system is always related to tree-like thinking, which embodies the characteristics of striated space; while the informal system reflects rhizomic thinking, which characterises the smooth space. The continuum of formal/informal nexus (Chapter 1) implies how striated/smooth spaces always occur in mixture. Yet the real potential of assemblage theory lies in an understanding of how informal housing emerges within complex assemblages of both informal and formal processes.

3.1.3. Ontological security

In earlier chapters I have discussed the notion of tenure security, which is the ultimate aim of informal settlement development. Tenure security relates to what Anthony Giddens (1990) terms ‘ontological security’, which he defines as ‘the confidence that most human beings have in the continuity of their self identity and in the constancy of their social and material environments’ (Giddens, 1990:92). For
Giddens, ontological security means one’s capacity to deal with ‘fateful moments’ that threaten his/her daily life, including the moment when one makes a decision relating to his/her future life. Informal development might lead to a ‘fateful moment’, because the decision to build without authorization may lead to various risks, ranging from facing the danger of hazardous environments to displacement, which might lead to tenure insecurity. All of these risks make such developments highly speculative as the decision to build may yield the lost of that investment.

Saunders (1990) argues that home is one of the important sources of ontological security (see also Dupuis and Thorns, 1998). A dweller can have more rights and flexibility in controlling the space within his/her house than in the outside world where they have to share the space with others (Saunders, 1990). But Saunders warns that the empirical operation of the ontological security concept is difficult, because ‘to test whether home ownership has any effects on levels of ontological insecurity we should presumably need to utilize sophisticated indicators of people’s level of worry, concern and paranoia as well as measures of self conception and positive social identity’ (Saunders, 1990:293). Nevertheless, while Saunders does not employ such sophisticated indicators in his research, he proposes some indirect indicators that link home ownership and ontological security. One of which is the strength of attachment to the house, similar to Tuan’s (1990) notion of topophilia. By comparing such strengths between owners and dwellers, Saunders (1990) significantly finds that the attachment of renters to their homes is much less developed than that of owner occupants.

By citing the work of Cooper (1976), Saunders identifies other indirect indicators concerning the relationship between tenure and ontological security, that is, dwellers’ expressions of their personal feelings through symbols in which ‘the house is one such symbol’ (Saunders, 1990:295). While Saunders realises that such claim is debatable 3 he argues that, ‘in most Western cultures, domestic space can play an important role in expressing individual identity’ (p. 295). Such ways of self-expression can also be found in the non-Western cultures (see for example Rapoport, 1969 and 1977; Tuan, 1990). This rationale suggests that, to some extent,

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3 Saunders (1990) cited the work of Pratt (1981), which argued that housing is not the only medium of self-expression.
the continuity and change of the built forms can express the dynamic of tenure, which is the central proposal of this research.

3.1.4. Nonverbal communication

Earlier I have argued that, while a semiotic approach might help us understand the way the built form reflects tenure dynamics, the meaning of built forms, according to Rapoport (1982), is too complex to be grasped through the semiotic lens. Rapoport proposes a non-verbal communication approach. He argues against the facts that the existing studies of nonverbal communication focus mainly on human gestures and tend to neglect the role of the built environment. Anthony Giddens for example, still maintains the classic definition of nonverbal communication – ‘the exchange of information and meaning through facial expression, gestures, and movements of the body’ (Giddens, 2008:131).

Rapoport’s model studies the meaning in the built environment. It ‘involves looking directly at various environments and settings and observing the cues present in them, identifying how they are interpreted by users’ (Rapoport, 1982:87). To this end, Rapoport borrows the work of Hall (1966) to categorise elements of the built environment into three features: fixed, semifixed, and nonfixed elements. Fixed-feature elements are parts of buildings that change very slowly or very rarely. They include foundations, walls, roofs, floors, ceilings, and so on. Semifixed-feature elements usually change fairly quickly. Furniture arrangements, advertising signs, interior decorations, are examples. Rapoport (1982:90) notes that ‘the use of fixed-feature and semifixed feature elements to make inferences about behavior (that is, about nonfixed-feature elements) is the rule in archaeology, although we have seen that this presents problems’. For Rapoport, such ‘problems’ means that in the field of archaeology, nonfixed (and often semifixed) elements do not ‘present’ in the observation, which makes non-verbal communication analysis imprecise.

However, in this research the case study approach assures the presence of fixed, semifixed, and nonfixed elements, because the data collected includes not only built form (fixed and semi fixed elements) but also the everyday life of kampung dwellers (nonfixed element), which might be implicated in the continuity and change of semifixed elements. Rapoport (1982:92) asserts that semifixed-feature elements
‘are much more under the control of users; hence they tend to be used to communicate meaning’. Renewal of painting, installation of signs, and the storage of building materials for future construction are some examples of semifixed-feature elements that might link to the dynamism of tenure in informal development.

In his other work on nonverbal communication, Rapoport (1988) suggests that meaning in the built environment can be scaled onto three levels: high-level, middle-level, and low-level. High-level of meaning relates to cosmologies, sacred matters, and world-views. The knowledge of these fields is esoteric, enjoyed exclusively by a few people (Rapoport, 1988).

The middle-level of meaning is about the identity, status, and power broadcasted through the medium of built forms (Rapoport, 1988), both fixed and semifixed. This type of meaning is more inclusive, in the sense that ‘commoners’ can grasp it fairly easily as they are expressed through, for example, the form, scale, symmetry, and colour of the buildings. Places of worship such as a church, mosque, and synagogue usually express elements that relate to each faith, which make these buildings easily distinguishable from each other. The sense of permanence, indicated by the quality of building materials within the fixed-feature elements, is another example of how middle-level of meaning can be read.

A low-level of meaning is broadcasted in a way that the observer can act on immediately upon receiving and understanding such a message (Rapoport, 1988). In other words, this type of meaning can directly influence observers’ behaviour. Signs that direct vehicle traffic and gates of a kampung are examples of low-level meaning that can be found in everyday life. The messages broadcasted within this level are more straightforward and easier to understand than those sent within the middle and high levels. Although it does not mean that the observers will immediately react upon receiving the messages.

3.2. Methods of analysis

As outlined earlier, I have selected two case studies for this research: kampung Sidomulyo/Kricak and kampung Tungkak. The former is located on the bank of Winongo River, while the latter is lining Codé River (Figure 3.2). There are six units of analysis employed in this research: history, tenure, morphology, utilities and
services, everyday life, and current changes and upgrading. These units of analysis are set based on the cases of informal development discussed in Chapter 1 and 2, which suggest that each unit can explain the built forms-tenure nexus. The following sections elaborate on each of these units.

Figure 3.2 Locations of the selected case studies (source of map: traced and reworked from the Yogyakarta Map published on www.indonesia-tourism.com, accessed on 10 January 2009).
3.2.1. History

A historical approach can help us understand the life cycle of an informal settlement. The task of historical analysis in this research is to respond to the following specific questions: when was the selected *kampung* established? Who was involved in the establishment? What factors influenced the establishment process? To what extent has the state been involved in the course of development? What continuity and changes occurred during the course of development?

The historical approach, as Leedy (1989) suggests, requires the researcher to stay as close as possible to the actual events. The challenge that followed was that the present inhabitants of the *kampungs*, selected in this study, were mostly newcomers who hardly knew, or were aware of the history of their neighbourhood. In addition, very little documentation on this matter was available except a few previous studies in different fields. Thus to describe the history of Sidomulyo/Kricak and Tungkak, archival study and oral history gained from the selected informants was triangulated. Such a triangulation leads to the production of morphological maps and descriptions of historical analysis to explain the progress of *kampung* formation over time. In the field of urban morphology, this approach is called *diachronic*, a method of analysis aimed at describing ‘the mechanism of evolution or creation and transformation of urban forms’ (Levy, 1999:81).

Referring to Leedy’s (1989) concept of an historical timeline, the depiction of a historical timeline in this research is based on important events remembered by the key informants. For example, in the case of *kampung* Sidomulyo/Kricak (Chapter 4), demolition of the homeless barrack by the state in the late 1960s and the moving of the evictees to the land owned by the landlords was one of the most memorable events for the seniors; while in the case of *kampung* Tungkak (Chapter 5), the late 1970s was seen as the transformation of homeless housing into a normal *kampung*, after the state granted administrative status (RT/RW). Each of these descriptions of events is linked to morphological maps to show the continuity and change in the built environment, through which the dynamic of tenure can be assessed. Referring to Zeisel (2006), traces of historical remnants (old buildings, ruins of built forms, and the like) are observed as well to refine the analysis.
3.2.2. Tenure

Tenure mapping is one of the key tasks in this research. Mapping is aimed at identifying the variations of tenure in each case study. This is the most challenging task in this research, as there are no precedents available. The existing references on tenure issues do not go beyond the detail of tenure variations (e.g., Payne, 1997; UN-Habitat, 2003; Soliman, 2004), while hard data on tenure does not exist either. Chapter 1 and 2 suggest that tenure represents the relationship between dweller and dwelling. The basic principle of tenure mapping is therefore to identify the dweller’s tenure position. Dwellers in this case is the head of each household who formally/informally have the agreement with either the state (the authorising body) or the property owners. Therefore, dwellers in general can be categorised into owners and renters. In the case of renters, dwellers observed in this research represent each head of household, who hold an agreement\(^4\) with the agents (landlords). Conversely, in the case of the legal property owner, the state becomes an agent who grants the land title and building permit. These agents influence the household’s tenure status.

Referring to Table 1.6 (Chapter 1), which shows attempt to measure the typical levels of tenure by Payne (2003) and others, we can infer that tenure mapping covers not only the relationship between owner and renter. Tenure mapping also looks at the status of land (legally owned, quasi-owned, rented, Sultan land, and so on), in addition to the status of residential buildings (legally or illegally occupied). The combination of dweller – building – land relationships, leads to the identification of various level of tenure. Tenure mapping explains how territorializing and deterritorializing effects might occur, reflecting the varying degrees of relationship between dwellers and dwelling. The mapping is conducted by incorporating tenure matrix (Table 2.4 in Chapter 2) with colour coding corresponds to the types of tenure occurred in the observed settlement. For example, Table 3.1 shows how colour coding is integrated with Table 2.4, where ‘Own/Own’ (marked in

\(^4\) The agreement does not have to be a written one. In fact most of agreements made were unwritten.
green) and ‘Own/Use’ (marked in red) are tenure types occurred in the observed location.

These two colour codes are then plotted onto a morphological map, to indicate the geographical position of these tenure types. The morphological map will show the overall profile of tenure structures, which will indicate the variations and positions of tenure type in the observed kampung. The aim of this assessment is to see the linkages of these tenure types with other units of analysis, such as building materials used in housing construction (part of the ‘morphological’ analysis). By relating tenure types with building materials, we might be able to identify whether a higher sense of permanence of building materials correspond to a higher level of secure tenure. Another unit of analysis linked to tenure analysis is electricity supply (under ‘utilities and services’). The pairing of tenure analysis and electricity connection will show whether or not the formalisation (state influence in the development) occurs in the unauthorised neighbourhood, and so on.

**Table 3.1.** Sample of template used for tenure mapping (based on Table 2.4)

<table>
<thead>
<tr>
<th>LAND</th>
<th>HOUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own</td>
<td>Own</td>
</tr>
<tr>
<td>Rent</td>
<td>Rent</td>
</tr>
<tr>
<td>Use</td>
<td>Use</td>
</tr>
</tbody>
</table>

3.2.3. *Morphology*

Morphological analysis examines the morphology of ‘hard space’, which as Trancik (1986:61) defines, ‘are those principally bounded by architectural walls’. However, while Trancik’s definition focuses on public space, this research looks at both public and residential/private spaces. The analysis examines three domains: building functions, built landscape components and building materials.
Building functions are categorised into residential and non-residential. Residential functions include housing and its utilities (bathroom and toilet). As described in Chapter 2, the utilities are often shared, either built through community participation or through state grants. Non-residential functions vary, but the most common functions encountered were meeting halls and religious buildings. Analysis of building functions is not limited to how the buildings accommodate human activities, but also who built and appropriated such buildings, which reveals the role of external actors in the development. External actor, such as the government and NGOs, often provide avenue for kampung residents to improve the quality of the built environment, which might lead to the advancement of tenure.

Built landscape components include streets, lanes, paths, and open spaces (e.g. sports court, pond and so on). Their role in tenure stabilisation is imperative as these components usually emerge at a later stage of the development, which might indicate a collective gain of higher tenure. Moreover, these components often become an entry point for the state to extend their influence. The KIP (Kampung Improvement Program) outlined in Chapter 2 is one example of how the government provides support to upgrade the kampung’s deteriorated infrastructure. This state intervention is an example of de facto recognition of informal settlements.

Building materials used might suggest a resident’s tenure condition. The agreement in ngindung (land leasing) described in Chapter 2, for example, requires renters to build their house with non-permanent (temporary) materials. However, of course these descriptions cannot be taken for granted, as a house with non-permanent building material can last for years, and is not always related to the resident’s tenure condition. Consequently, the morphological analysis combines direct observation with information obtained from the interviews on how the built forms were constructed and appropriated, combined with information obtained from archival studies.

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5 Turner (cited in Pugh, 2000:331) suggests that activities such as ‘outside decorations of housing, plantings and pot flowers, and various aesthetic features signify important things about the state of mind of residents. It represents a commitment to place and home, and such activities tend to occur more frequently where occupancy right and/or tenure are secure or there are expectations that regularisation of tenure will occur in the near future’. 
3.2.4. *Utilities and services*

Utilities and services include electricity, water and sanitation, and waste management. As with the built landscape, utilities and services often become an entry point to state and external interventions, which as described in Chapter 1, might lead to the attainment of *de facto* tenure. The task of analysis for this unit is to identify to what extent the state and non-state electricity and water supply operate within the neighbourhood. In so doing, data gathered on electricity and water networks from field observations are integrated with the morphological map template. The result indicates the position of houses that have or do not have electricity/water meters installed. Interviews with key informants provide information on houses that have either state or unauthorised electricity connections (shared or tapped directly from the poles).

Similarly, mapping of water meters reveals houses with state water supply as compared to those relying on public bathrooms or the river. Public bathrooms have the same potential to invite outside interventions as that of the built landscape outlined above, because water and sanitation are typically viewed as major issues in the degradation of informal settlements. Mapping the position of shared bathrooms/toilets included identification of who played the major role in the construction of such public facilities. These findings led to the identification of the dominant features of electricity, water, and sanitation networks, which inform the proportion of formal versus informal supply of electricity and water to the observed *kampung*.

In addition to electricity, water, and sanitation issues, waste management also has the potential to invite outside interventions. Cases outlined in previous chapters suggest that state intervention in waste management issues could either threaten or maintain the existence of slum dwellers. Observations of the selected case studies were focused mainly on solid waste management, responding to the question of how the community collected their solid waste, and how the waste collection pattern they had established connected to the ‘formal’ waste management system. Findings of these observations were then integrated in the morphological maps to identify how such environmental issues contributed to issues of external interventions.
3.2.5. Everyday life

The term ‘everyday life’ often referred to as how lived experiences take place (e.g. de Certeau, 1998; Giddens, 2008). Since such experiences comprise a wide array of spatial practices, these need to be confined to enable this research. This unit of analysis focuses on how dwellers use public spaces in their neighbourhood and how they use existing social networks to maintain the built environment. Simply said, it is about neighbourhood governance in the selected case studies. The data was obtained through interviews with dwellers, mainly the neighbourhood leaders and social activists, in addition to direct observation of the built forms that relate to such spatial governance and archival study.

Reviews of literature (Chapter 1 and 2) suggest that the collective capacity to govern the settlements through the establishment of spatial control reflects progress in tenure attainment. The main collective activities observed were ronda (night patrolling) and the sharing of public and private spaces. Night patrolling usually involves door-to-door money collection to support community-based neighbourhood maintenance and the construction of public facility.

Shared public space often occurs as a result of insufficient private space, which leads to the spilling out of private activities into public spaces. While such phenomenon might have no direct link to tenure issues, shared spaces reflect an ‘understanding among agents’ (Habraken, 2000) on how to anticipate and compromise with the needs of others, which are an important aspect of day-to-day living that might lead to community resilience.

3.2.6. Current changes and upgrading

While historical analysis looks at continuity and change over a long period of time, that is, since the establishment of the kampung until the commencement of first fieldwork trip (December 2007); current changes and upgrading looks at changes which occurred in a short period, within six months after the end of the first fieldwork period (recorded during the second fieldwork trip, conducted in September – October 2008). The aim of this analysis is to get a better ‘resolution’ of the dynamic of the production and appropriation of built forms, as data from the
first fieldwork trip is mostly based upon second hand information (interviews and archival studies). In other words, this unit of analysis is aimed at refining the findings of continuity and change in the built environment. Changes recorded and mapped include the occurrence of new built forms (buildings and infrastructure) and changes in the existing built forms as a result of demolition, disaster, reconstruction, rehabilitation, and extension. This analysis also looks at the role of actors involved in such a short period of development, and what implications the development is having on the existing built environment.

3.3. Methods of data collection

Groat and Wang (2002) have replaced the term ‘methods’ with ‘tactics’, to describe the way in which an investigator conducts data gathering. As outlined in the following Sections, I have employed five tactics in this research: pilot study, archival study, morphological mapping, interviews, and visual recording. Each of them provides evidences for the analyses outlined in Section 3.2.

3.3.1. Pilot study

A pilot study was an important ‘tactic’ to familiarise myself with the selected case study prior to the actual data collection process (fieldwork), and to gain initial access to the community. This activity took place in kampung Sidomulyo/Kricak (the first case study location), in conjunction with an ‘Informal Settlement Field Trip’ coordinated by my research supervisor and myself. The trip, which was run in July 2007, was the main activity within a course called ‘Investigation Program’, offered to masters and advanced undergraduate students at the Faculty of Architecture, Building and Planning, University of Melbourne6.

During the pilot study, two main field trip activities provided an avenue towards the data collection process: getting to know the key persons7 in the community and morphological mapping exercises. The former helped me to gain a better access to the key informants, while mapping exercises helped in the

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6 Some of the early findings from this fieldtrip have been published in a book chapter (see Dovey and Raharjo, 2010).
7 Meetings with the key people were facilitated through Yayasan Pondok Rakyat (YPR) a local NGO, which had worked with the Sidomulyo/Kricak community in recent years.
development of methods for observing the built environment and mapping techniques.

3.3.2. Archival and documentation study

Archives and documents were gathered from various sources, particularly from the NGOs (YPR in particular) who had previously conducted advocacy programs in both *kampung* Sidomulyo/Kricak and *kampung* Tungkak. Materials gathered from YPR include photographs of various events and built forms, original interview transcripts from an unpublished research project, research reports, and maps. The National Land Agency (BPN - *Badan Pertanahan Nasional*) office at the municipal government of Yogyakarta provided verbal information (through interview) about their recent policies and significantly also provided access and permission to photograph some important official tenure maps of the selected case studies. These maps were invaluable sources of information for the triangulation process in tenure analysis.

While literature and documents on the state land tenure system (BAL) are relatively abundant, documents on the Sultan land tenure system are rare. For this research, I have had to rely on newspaper clippings, which fortunately presented articles on this matter in great detail. Discussions with a local land expert during a fieldwork interview also provided substantial information on both state and Sultan lands issues.

Maps of colonial Yogyakarta are important sources for historical analysis (Section 3.2.1) and morphological mapping (Section 3.3.4), but the existing maps found from the local (Yogyakarta) sources were mostly insufficient in terms of readability due to very poor graphical quality. The only reliable map of colonial Yogyakarta was a map made in 1925, obtained officially from the Royal Tropical Institute (Amsterdam). This map was used as a departure point for historical analysis in each case study chapter (Chapters 4 and 5).

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8 These maps were all manually reproduced from (the missing) Dutch made maps.
3.3.3. In depth interviews

In depth interviews were the most challenging data collection events in this research notwithstanding I had established initial contacts with some of the key informants during the pilot study. One predictable challenge prior to the commencement of the first fieldwork trip was the informants’ lack of knowledge of the information needed for my research. To overcome such a problem, a snowball approach was employed, which as Patton (2003) describes, is a method of data collection whereby investigator selects initial informants who are considered to have reliable information relating to the required data. Upon the interview, the investigator might find that these informants have given inadequate information. But through their recommendations, other knowledgeable informants might be identified and interviewed as well.

For this research, interviewees (informants) were selected from people with different social backgrounds; they included kampung residents, community leaders, social workers (NGO activists), local expert, and government officers. The first two actors represent grass root community, who live in the kampung, while social workers were those who worked with the community to assist them in various types of community-based development initiatives. The local expert in this research was a property law expert, who had considerable knowledge on both state and customary land tenure system in Indonesia and how it is applied in practice. Government officers were selected from four institutions: City Planning Agency (Bappeda) of Yogyakarta, Regency Planning Agency of Bantul and National Land Agency of Yogyakarta. The total number of person interviewed is 28, which consists of 20 residents (including community leaders), two NGO staffs, four government officials, and two experts (land and community development).

Questions were delivered in a semi-structured manner mostly through informal conversation, while the interview settings were all within the interviewees’ context (interviewees’ houses or offices/work places). Based on the approved ethical procedures, names of interviewees are kept anonymous in this thesis, and all the consents were obtained verbally (audio consent). The interviews were conducted in either Bahasa Indonesia (Indonesian), Javanese or mixed, and were digitally recorded. Each of these recording was transcribed in English and triangulated with
other data sources (including other interviews), and became one of the primary sources for historical analysis and morphological mapping.

3.3.4. Morphological mapping

In Chapter 1, Moudon (1997) suggests that different levels of resolution of mapping can be applied to understand the characteristics of urban forms (see also McGlynn and Samuels, 2000). One of these, applied in this research, is the level of ‘street/block’ of settlements. But morphological mapping in this research implies not only to map the urban forms and building functions (as what the literatures on urban morphology often presented), it goes far beyond that. It follows what Deleuze and Guattari (1987) have postulated about ‘mapping’ outlined in Section 3.1.2.

Thus while mapping in this research began with digitizing (digital tracing) aerial photographs of the chosen case studies, such tracing was aimed at producing templates of morphological map, to be merged with information from the field observations, interviews, and archival studies, to reveal the facts related to each unit of analysis described in Section 3.2. The digitizing of aerial photographs had to be carried out as no maps available in public domains, which supports the claims that invisibility characterizes the fabric of informal settlements (Chapter 1). In addition to digitizing, the production of final maps involved field mappings as well, as the aerial photograph could not reveal many narrow lanes and alleys between buildings, which usually lay under the edges of the roofs. It is also impossible to reveal small parts of the built forms, such as electricity and water meters through aerial photographs. Maps made by the community, such as a 3D model of neighbourhood found in kampung Tungkak (Chapter 5), became indispensable sources of information.

In other words, the aim of morphological mapping in this research is not only to reveal morphology of the built environments per se, but more importantly ‘to make visible something invisible’ (Jacob, 1999:24). Mapping is an agency, ‘its agency lies in neither reproduction nor imposition but rather in uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds’ (Corner, 1999:213).
3.3.5. *Photographic and video recording*

In addition to audio recording used in the interview, photographic and video recording were vital in supporting the data collection. Photographic approach was especially useful in what Zeisel (2006:159) calls ‘observing physical traces’, to read the continuity and change of the built environment. In so doing, I employed what I call ‘repetitive picture capturing’, in which I used two or more photographs taken on approximately the same spot to analyse the differences of the captured objects. The first (older) photograph could either be taken before the first fieldwork (taken from the archives) or during the first fieldwork, while the second photograph is taken during the second fieldwork (commenced six months after the end of the first fieldwork). By comparing these pictures, continuity and changes of the object can be identified.

The use of video recording was aimed at helping the investigator to memorize the locations of spaces frequently used for public activities, and the characters of invisible9 lanes and alleys. Video recording was instrumental in the production of morphological maps. Several sequences of video recording were made by walking along the lanes throughout the neighbourhood in both Sidomulyo/Kricak and Tungkak, particularly the narrow lanes covered by edges of the roof.

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9 Invisibility in this case is referred to the viewing from the air (aerial photograph).
CHAPTER 4

SIDOMULYO/KRICAK: DEVELOPMENT OF RIVERBANK SETTLEMENTS

Sidomulyo and Kricak are two adjacent *kampung* located in the northern periphery of Yogyakarta (Figure 4.1). The settlements have emerged as a result of unauthorized subdivision of private property and unauthorized invasions of state-controlled lands over the past 30 years. The case study area covers the entire Sidomulyo and the western tip of Kricak. Sidomulyo consists of three clusters of settlement, namely Atas, Bawah, and Lengkong, all of which have made the total area of 7.9 ha. While the whole Kricak covers a total area of approximately 20 ha, the selected case study area for Kricak is one neighbourhood (RT 35) that covers an area of approximately 1.3 ha. The distance of these *kampungs* to Magelang Street\(^1\) is approximately 400 m (Figure 4.1). Because of this, Sidomulyo and Kricak are largely hidden behind commercial buildings and clusters of more well off housing. The existence of these *kampung* on the bank of the Winongo River also demonstrates a typical character of urban informal settlements in Indonesia whereby river becomes an embedded part of everyday life.

This chapter aims to describe how residents gradually gained tenure, and the relationships of built forms to the dynamic of tenure. Following the methods of analysis (Chapter 3), this chapter consists of three parts. The first part presents historical analysis of settlement’s formation, from the formation of Atas to the informal property speculation in Bawah and Lengkong. The second part analyses the built form/tenure nexus, which consists of five units: tenure, footprint, utilities and services, everyday life, and current transformation of the built forms. Both the historical and assemblage analysis combines graphical and narrative methods of morphological mapping. Lastly, the third section presents the discussion, which incorporates the analytical toolbox with the historical and morphological analysis to better understand the way this *kampung* developed.

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\(^1\) Magelang Street is one of the main streets in Yogyakarta where commercial buildings are located. The street links Yogyakarta and the city of Magelang.
4.1. Historical analysis

4.1.1 Kricak until the mid 1960s

In the early 20\textsuperscript{th} century, the areas now called Sidomulyo and Kricak (Figure 4.1) were all part of a much larger semi rural settlement called ‘Kritjak’\textsuperscript{2} (Figure 4.2), which lies on the northern fringe of the city of Yogyakarta. ‘Kricak’ is a Javanese term meaning ‘small stones’. This term refers to the abundant source of sand and stones for building construction in the area along the Winongo River, which has long been one of the main sources of livelihood for the residents of the area. The rock crushing activity can still be seen today.

The early administrative division of Kricak (Figure 4.3) follows the RT/RK system, which as described in Chapter 3 was inherited from the Japanese \textit{aza} and \textit{tonarigumi}. The area selected for case study (RT 90 and RT 91 in Figure 4.4) had a lowest density compared to the rest of Kricak. Interviews suggest that until about 1969, there were only 11 households living in 11 houses, on four plots of land in RT

\textsuperscript{2} The spelling of ‘Kritjak’ uses the Dutch-influenced pre 1970s Indonesian alphabet.
90 (referred to as Atas). Previous research by Lont (2002) suggests that the built environment of early Kricak was characterized by very low-density housing and spacious gardens planted with mostly jasmine and cat’s claw trees\(^3\).

![Figure 4.2](image-url) Location of ‘Kritjak’ (Kricak) in the 1925 colonial map of Yogyakarta\(^4\) (source: extracted from 1925 digital map of Yogyakarta, obtained from the Royal Tropical Institute, Amsterdam, 2009).

Other important fact that influenced the character of the built environment, as explained by an informant, was the Dutch-made railway track laid along the west side of the main street (today’s Magelang Street), which connected Yogyakarta with Magelang, operated until the late 1960s. The lanes that connected the interior of Kricak to this main street were not paved; they only served pedestrian and bullock carts. No electricity was available, except for the street lamps.

When the administrative boundary of urban Yogyakarta was expanded in the 1960s, the rural area to the north of Kricak, called Jatimulyo (Figure 4.3) was annexed to the city. Jatimulyo was once renamed Kricak Lor (North Kricak), while the existing Kricak was then called Kricak Kidul (South Kricak). However, the name North Kricak does not exist today. An informant explains that the renaming of Kricak Lor back to Jatimulyo was presumably an act of image cleansing, as in the past the

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\(^3\) *Uncaria gambir.*

\(^4\) The length of one grid in the map is approximately 800 m.
population of Kricak was dominated by those who frequently engaged in crime, mostly gambling and burglary.

**Figure 4.3** Administrative boundaries of the whole Kricak after the implementation of the RK neighbourhood administrative system in the early 1950s (Map overlaid on 2007 Google Earth image).

**Figure 4.4** Early administrative division of the selected case study based on Figure 4.3 (drawing by author, 2008).
In the early 1960s, the strong existence of PKI (Partai Komunis Indonesia – Communist Party of Indonesia) gradually influenced the social fabric of Kricak, by the coming of migrants from Gunung Kidul Regency (Lont, 2002). The influx of these migrants led to an increasing number of PKI members in Kricak, meaning this settlement was considered to be one of the important strongholds of the PKI.

With regard to the built environment, Lont describes the landscape of Kricak during this period as more rural than urban; only one mosque existed as a public facility, but nobody dared to use it, because ‘A strong religious regime would only have been an obstacle for enjoying the worldly ‘vices’ that flourished during this period’ (Lont, 2002:34). The mid 1960s, as a number of historians have written (see for example Ricklefs, 2001; Friend, 2003), saw the mass murder of thousands of PKI affiliates including their relatives, followed by years of banning of existing PKI affiliates from the formal workforce in Indonesia. Kricak as one of the PKI strongholds could not escape from the raid. Lont (2002) briefly mentions that the raids carried out by the police with the help of non-PKI civilians led to the killing of many suspected PKI affiliates at Kricak. A few of these PKI affiliates (including two informants) moved away from Kricak to avoid these raids, but later they came back to reunite with their families. An informant, who was a suspected PKI member, stated that he went away from 1964-65. When he returned to Atas in 1966, he was prohibited from holding the position as an RT chief, despite the fact that the existing RT chief could neither read nor write. Another informant, a teacher-turned-scavenger, explained that he entered his current profession because he was banned from engaging in formal work by the New Order regime.

4.1.2. Construction of the homeless barracks and densification of the riverbank settlements (1966 – late 1970s)

In 1966 the raids on PKI affiliates continued all over Indonesia. However, in Yogyakarta the raids were not only limited to these people alone, as there were many homeless and prostitutes caught in the raids as well. The state seemed to assume that the PKI had emerged within this social class (Sukses, 1995). Some were

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5 Lont’s argument is based on Selosoemardjan’s research findings that PKI made successful in gaining the highest number of voters in Gunung Kidul (Selosemardjan, 1962).
housed in the newly constructed rehabilitation centre built in 1966, on a site today known as Bina Karya Rehabilitation Centre (see the location on Figure 4.9a). This facility was probably intended for temporary shelter, as according to an informant, the military built them using what is now perceived as temporary building materials: bamboo for the structural frames and walls, and sugarcane leaves for roof coverings. The locals often called it penampungan (barrack), which implies a temporary place.

The disappearance of PKI affiliate, either killed, moved away, or housed in the rehabilitation centre was soon replaced by the influx of migrants who gradually settled in Kricak, which resulted in a significant increase of population. A former community leader describes that the reason these new migrants came to Kricak was mainly because of the investment opportunity. The price of land in Kricak was very cheap, as many of the landowners were keen on gambling. They often had to sell their lands when they lost a game. Lont (2002) writes that those migrants initially hesitated to move into Kricak due to its bad reputation. But good stories of Kricak from the pioneering migrants persuaded them to follow their predecessors, who were mainly civil servants. These people gradually changed the socio-physical fabric of Kricak by building houses and mixing with the existing residents. The second cycle of migrants arrived in the early 1970s. According to Lont (2002), a significant influx of gelandangan (homeless people), mostly labourers from Gunung Kidul regency, occupied the riverbank area. They either rented the land from the landlords or claimed the vacant land as squatters.

In 1976, the government decided to close the temporary rehabilitation facility and demolish the buildings, presumably due to a shortage of funding. Prior to the demolition, residents were coercively evicted. The state provided compensation to these evictees but the amount was only Rp. 10,000 (A$ 1.25 in today’s

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6 The sense of permanence is often used as a reference to categorize the building types in terms of construction. There are three common categories: permanent (brick/concrete); semi permanent (brick/bamboo); and temporary (bamboo or timber).

7 Lont does not mention the construction of homeless barracks and the implementation of the government’s decision to demolish these facilities in 1976. He describes his informants as hesitating to speak when it came to questions related to PKI activity, which was still a sensitive issue to talk about at the time of his research.
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conversion)\textsuperscript{8} per family and Rp. 5,000 (A$ 0.65) for a single person. These amounts were far too small to cover the monthly rent even for a simple room at that time.\textsuperscript{9}

Many of these evictees decided to accept the offer of two landlords to rent vacant land around their houses at Atas, part of Kricak within the loop of the river (Figure 4.1), while few of them chose to settle across the river (Kricak). Those who built on a plot of 3m x 3m must pay Rp. 1,500 per year, while those who wanted to rent a plot of 3m x 6m must pay Rp. 3,000 per year.

The above rules are a modification of ngindung, a traditional Javanese land leasing system whereby a land renter builds house on the land around the landowner’s house, using materials that have less sense of permanence such as bamboo and timber, to allow easier demolition when the lease ends (Chapter 2). One informant argued that at the beginning of his renting years his house was so fragile that the bamboo structure could be ruined ‘just by the push of a hand’. He rented the land from one of the influential landlords, and he described that these landlords took the money in advance from all of those who decided to move into Atas. The majority of these migrants accepted the landlords’ offer, despite the fact that the rental cost increased annually.

The further rule these landlords applied to the renters was related to building construction. Under the practice of ngindung, renters do not have the right to claim land ownership. Basically, upon the termination of an agreement, they must return the land to the landlord as vacant possession and in its initial condition. Renters would naturally avoid spending too much money on construction, as they have to vacate their plot at the end of the lease. Therefore, they would use building materials that are easy to demolish - bamboo poles and mats are most common.

There are two terms used by the residents to frame the landlord-renter relationship within this practice of ngindung\textsuperscript{10}, namely kontrak (contract) and sewa (rent). Although in general conversation people often freely interchange them, in Atas people understand them differently. One landlord states that kontrak involves a

\textsuperscript{8} A$ 1 is equal to approximately Rp. 8,000 today. This conversion is of course not accurate because the exchange rate between Indonesian Rupiah and US Dollar is much lower at that time.

\textsuperscript{9} In the late 1970s, the average monthly cost of a very simple boarding room for students (within a semi permanent house) was Rp. 15,000 (approximately A$ 1.87 in today’s exchange rate).

\textsuperscript{10} This term is valid only within the area of Sidomulyo/Kricak.
written agreement between landlord and renter, while *sewa* is unwritten. The former is more formal and easier to control, as the landlord could discontinue the tenancy at the end of the term, without having to negotiate. The latter is more fluid and rather difficult to manage, meaning that the landlord might have to negotiate with the renters at the end of the lease to displace them.

The land subdivision at Atas was spatially unplanned, as all divisions were based on the availability of ‘lost space’,\(^{11}\) the residual spaces around landlords’ houses. There is no record on the density of this informal subdivision, but current morphological mapping shows that the northwest area has the highest housing density. Most of the residents of this area are renters of the allotments, which are located adjacent to each other.

A Christian church was the first public building constructed at Atas. This church was built on the premises of one resident in 1977, but then moved to another location where it stands and functions today. The early architecture of this church was simple; it was constructed of half-brick-half-woven bamboo walls, roofed over with dry coconut leaves. The roof has been replaced with asbestos cement sheet, while the walls remain primarily the same. Apart from catering for the religious activities of the Christian community, the building has also been used to accommodate a more public purpose such as Sunday school, *arisan* (rotating savings program for women), and other public gatherings.

The end of 1970s saw the changes of neighbourhood administrative territory. Atas was initially framed as a single RT (RT 91) for administrative purpose, but rapid population increase in the 1970s led to an application for division into two RTs in 1978: RT 91A and RT 91B (Figure 4.5). At the point of separating RT 91A and RT 91B, this was an important move because it required the RT chief to write down the names of all residents on a Family Card, since many residents (mostly former evictees) did not have an official identity card or recognition for both their identity and their house. Obtaining a Family Card is a primary step towards the application of

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\(^{11}\) I use the terms ‘lost space’ introduced by Trancik (1986), as it is a similar notion to the way in which these landlords perceive the residual spaces around their residences, and how they created ‘found space’ to benefit such residual spaces.
KTP (Resident’s ID Card) - a formal identity that allows resident to get various government services.

![Figure 4.5](image)

**Figure 4.5** Subdivision of the neighbourhoods in 1978 due to population increase\(^\text{12}\) (Source: drawing by author, 2008).

4.1.3. The 1980s: a **decade of dynamic socio-spatial changes**

The decade of 1980s saw at least four significant socio-spatial changes took place in Kricak: early invasion of Bawah, OPK, flooding, and implementation of the RT/RW administrative system.

The area today’s known as Bawah is the strip of waterfront land about 8 meters wide, between the compound wall of the Bina Karya Rehabilitation Centre and the river (Figure 4.9). The initial land invasion of Bawah was not carried out through building construction. Instead, it occurred through land cultivation. An informant, who moved to Kricak after the 1976 barrack demolition, claims that he and another resident were the pioneers of the land cultivation in the early 1980s. Neither of them had any initial intention to build a house. All they wanted was to cultivate the land to support their family apart from working as a security officer in the city. They planted corn, chili, and cassava for about five years (between 1980 and 1985), but someone from Atas asked if he could also have a share of the land.

\(^{12}\) The area of RT 90 was divided into RT 90A and RT 90B, but the latter is not included in this figure, as it is not part of the case study.
My informant responded that he did not have the authority to allow him because
the land did not belong to him either.

Such a non-committal response marked the way forward towards
incremental land subdivision for informal housing development, as the man who
asked the question above was the first person to start laying out the foundation and
building a house on a plot sized approximately 6m x 4m. This construction was soon
followed by the rapid arrival of other invaders, who not only came from Atas but
also from Kricak. Most of them were simply marking out their claimed plot by placing
wooden sticks in the ground. My informant’s wife describes the process of invasion
with the word rayahan, a Javanese word commonly used to describe a group of
animals squashing each other to get limited food. She was very disappointed with
her husband for not joining the rayahan, which finally led to the loss of his claimed
farmland.

Another informant who joined the rayahan says:

They wanted to claim the land by placing some markers. So, I moved towards
the south and I did the same; I claimed the land by placing some markers. I
divided it into 6 parcels, each 4m x 5m in size.

This informant led an organized effort with a group of five people who worked
together part-time in a Chinese cemetery relocation project about 4 km east of
Kricak. As diggers, their task was to demolish the massive tombs made of bricks and
stones, and to unearth the bodies of the dead, which were interred in the wooden
coffins. This job gave them the opportunity to collect the unused bricks of the
demolished tombs and timber from the unused coffins, which were later used for
the initiation of housing construction at Bawah. He obtained some money for the
construction of foundation and walls by selling the treasures, such as jewellery and
gold teeth that he found during his digging assignment.

Meanwhile, OPK (Operasi Pemberantasan Kejahatan - Operation of Crime
Eradication) took place intensively over this kampung in 1983. OPK was widely
known as a military strategy implemented in Yogyakarta, to punish criminals without
trial. The term ‘punish’ often had a connotation of ‘death penalty’ carried out by the
so-called Petrus - an acronym of PEnembak misTeRiUS (mysterious sniper), a secret
policeman who was perceived by the residents of Yogyakarta as having the ‘licence
to kill’ the suspected *Goli* (a local term for gangster)\(^{13}\). Lont (2002) reports, the police used a number of approaches in eradicating *gali*, from secret killings to a massive raid. The existence of OPK in this settlement left the image of this settlement as a dangerous place in the 1980s.

![Figure 4.6 Left: 1984 flood water level elevation based on a marker made by a resident of the west bank (Jatimulyo) real estate (photo credit: author, 2007). Right: Condition of “Karangrejo” bridge in July 2007 (Photo credit: Lochlan Sinclair, 2007).](image)

The post-OPK years saw a significant change of the built environment caused by the great flood (*banjir bandang*) of the Winongo River on 4 February 1984 (see marker in Figure 4.6 Left). The water flooded the entire Atas and the east bank of Kricak. An informant describes that all the bamboo houses and the old bridge that linked Atas to the east bank were washed away. This old bridge was constructed a decade before, using a timber structure. In 1985, a concrete and steel structured bridge was constructed (Figure 4.6 Right) to replace the washed away wooden bridge. The tablet attached on the north side railing of this new bridge says that the ‘Karangrejo’ bridge was constructed through the collaboration of ‘ABRI’ (*Angkatan Bersenjata Republik Indonesia* – Armed Forces of the Republic of Indonesia), ‘Pemda’ (municipal government), and ‘Rakyat’ (people), to mark the 40th anniversary of ABRI.

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\(^{13}\) *Goli* was an acronym of *Gabungan anak Liar* (Deviant kids Association), but the term often applied to an individual who committed crime by means of a show of force to the victims, such as robbery, offering security services to shop owners, and managing parking lots along the commercial streets.
Since the population growth of an RT was intended to be relatively stable, the rapid population growth in Kricak produced a series of further subdivisions into RT territories\textsuperscript{14}. These divisions were at once administrative and social. The division of Atas into RT 91A and RT 91B outlined earlier was a separation of an area to the west where the barrack evictees had settled. As the government implemented the RT/RW system in 1989 (Chapter 2), Atas was subdivided again into four RTs that were then renamed RT 13 – 16, and the southern part of RT 90 was reterritorialized as RT 35 (Figure 4.7). The poorest and densest part of the settlements was the smallest RT 13 in the northwest corner, which was also the most exposed to floods. The place name Kricak (crushed stone), which had hitherto applied to both sides of the river, henceforth applied to the east side. All of the area within the loop of the river was then known collectively as Sidomulyo (becoming prosperous), because this settlement was annexed to RK Sidomulyo\textsuperscript{15}.

A former RK chief of Kricak explained that the existence of the Winongo River formed a natural boundary between Atas and the rest of Kricak (Figure 4.6 Right). The existence of such a natural boundary became one of the state’s arguments for separating Atas from the RK Kricak Kidul. The reaction to such a decision was mixed. On the one hand, Atas residents tended to reject it\textsuperscript{16}; on the other hand, Kricak east bank residents (RT 35) seemed to welcome the separation. An informant from Kricak believed that such a separation would protect those residents from the influence of Atas residents. His statement reflects a continuing negative stereotyping towards the people of Atas by the Kricak residents.

The post-separation periods saw the densification of Atas and the east bank settlement (Kricak) as a result of continuous informal land renting (\textit{ngindung}) and selling. A mosque called ‘Fisabillah’ was constructed in RT 13 of Atas in 1990 by the community on a plot donated by one of the landlords.

\textsuperscript{14} The formation of RT is based on the density of population instead of spatial considerations. Therefore, a smaller area does not always reflect a smaller population.

\textsuperscript{15} As discussed in Chapter 2, the names of RK were formally erased upon the implementation of RT/RW system in 1989. But these names did not vanish, as residents continued to use them informally.

\textsuperscript{16} An informant explains that Atas residents sent a petition to the mayor, but it was refused.
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Figure 4.7 Subdivision of the neighbourhoods after the implementation of RT/RW administrative system in 1989 (Source: drawing by author, 2008).

Figure 4.8 Schematic diagram of movement patterns of the former barrack residents after the 1976 barrack demolition (map not to scale, drawing by author, 2008).
In sum, the demolition of homeless barrack in 1976 could be regarded as a milestone towards the densification of today’s Sidomulyo. Figure 4.8 shows a pattern of movement of former barrack tenants after the 1976 barrack’s demolition, which reveals that Bawah and Lengkong were actually initiated by the former barrack tenants, who used to inhabit the temporary barrack on the today’s site of Bina Karya. The next section describes the further development of Bawah, the invaded area along the eastern side of the Bina Karya Social Rehabilitation Centre, followed by an account of the development of Lengkong.

4.1.4. Authorisation of Bawah and new land invasions (1990s – 2008)
The early 1990s saw an increasing intensity of land invasion in Bawah, which shortly thereafter turned to property speculation and gradual construction of houses (Figure 4.9). An informant argued that the high intensity of construction began only about 10 years ago (about 1998), when people began to invest some money to start construction. Before the monetary crisis in 1997, this informant decided to sell his unfinished house, which stood on a plot of approximately 4m x 5m (20 m²) for Rp. 750,000 (US$ 300)17. What people at Sidomulyo called a ‘house’ often comprised only a single room. No private toilet was available, as most residents have traditionally used the river for bathing and defecating, as well as washing the clothes.

The selling and buying activity in Bawah has been intensive since 2000. Some buyers intended to stay, while others have resold their properties or put them on lease. These people sold the parcel of land in incremental pattern, that is, after claiming a parcel of land (by placing wooden sticks or laying out foundations), they sold it; then claimed the land next to it and so forth until reaching the southern tip of Bawah (Figure 4.9d). Properties were sold in any condition - a finished house, a plot with laid foundations, or just a marked parcel. At the time of my second fieldwork visit (September 2008), the ongoing invasion was taking place extending the Bawah strips further down stream, on a very fragile piece of land next to the deep edge of the river (Figure 4.10).

17 I use the US currency at this point, as I have no information about Australian currency exchange to Rupiah for those days. US$ 1 was equal to an average of Rp. 2,500 before the 1997 economic crisis.
The price of land in Bawah keeps increasing from time to time. A former youth activist currently living at Kricak explained:

I bought a parcel of land sized 3m x 6m for Rp. 1,500,000 in 2000, then I bought stones, sand, and steel rods to start the construction. But I needed money, so I sold it to a prison’s guard a year later, for Rp. 2,700,000.

He further explained that the above buyer later did not commence the construction but instead sold the parcel to someone else for Rp. 4,000,000. One informant argued that many buyers are willing to pay Rp. 6,000,000 to 7,000,000 (A$ 750 to A$ 875) and even more these days.

The incoming residents from various backgrounds have made the social fabric of Bawah more complex and dynamic. One of the obvious groups of residents is the Waria (transgender people) who had inhabited RT 16 in Atas long before Bawah was settled. These people find RT 16 and Bawah to be a refuge because residents of other RT tend to refuse them. The aforementioned youth activist, for example, decided to sell his parcel at Bawah not only because he needed money, but also because his parents who lived at Kricak did not want to see him living among these Waria (transgender).

Bawah began to be regarded as a stable neighbourhood around 2000, by which time the community there had organized themselves into a social network that led to the authorization of the administrative entity. The settlement has since then been merged with RT 16 (Figure 4.11), and the residents have been granted KTP (Resident’s ID Card). At the time of the fieldwork in January 2008, they planned to propose a separation from RT 16, because the household population figure had reached the minimum quota (more than 25 households). However, the RW committee suggested them to postpone it until after the 2009 general election.
Figure 4.9  Development of Bawah in 28 years (1980 – 2008). Source: drawing by author based on the map produced by participants of Informal Settlements Field Trip, University of Melbourne, 2007.
(a) A passage that leads to a new invaded land (see the white circle), which requires a ladder to get through (photo credit: author, 2008)

(b) The invaded land has been cleared for future construction as depicted in Figure 5.12d (photo credit: author, 2008).

**Figure 4.10** New invasion at Bawah recorded in September 2008.

**Figure 4.11** Extension of RT 16 after the administrative authorisation of Bawah in 2003 (drawing by author, 2008).
Meanwhile, the demand of more land and housing kept increasing even after the establishment of Bawah. An informant explained that the limited space of Bawah had led the residents to invade the area on the west part of the loop, popularly named Lengkong, despite the recent finding that new invasion at Bawah began to occur as well (Figure 4.10). The following section describes the development of this newly invaded area.

4.1.5. Early invasion of Lengkong (1999 – 2001)

Lengkong is a site lining the river to the southwest of Atas but separated from it by a state primary school (built in the 1980s). The place was previously a vacant riverflat (wedhikengser)\(^1\) covered with shrubs and some big trees (Figure 4.12). Land of this type technically comes under the authority of the Irrigation Division (Dinas Pengairan) of the Provincial Government\(^1\).

An informant who was a senior scavenger and a former resident of the demolished barrack admitted that his family played a major role in the invasion. His eldest son and his three colleagues initiated a plan to invade this area in late 1999. This was not the first attempt of Atas’ residents to claim such a vacant land. Other groups had previously tried to do so through a courteous approach, that is, by first asking the state to give permission before they carried out the development, but this was unsuccessful. Unlike that of Bawah, this invasion did not begin with gradual cultivation of the land. This group instantly carried out a land subdivision by using wooden sticks as markers. This was a more difficult challenge, since they had to clear up the thick shrubs and big trees before setting up the plot markers.

Other residents of Atas followed this initiative, and soon there were 20 of them including the initial group. The initial group claimed some larger plots, on the basis that they had come first. However, other invaders complained and demanded fairer play. All then agreed to divide the land evenly into areas of approximately 40m\(^2\) (5m x 7m to 5m x 8m). The leader later took two extra plots for himself and his

\(^1\) Wedhikengser is a Javanese term denoting an area of land that lies between the edge of a river and the boundary of an authorized property (see Chapter 3).

\(^1\) Based on an interview with a land expert in Yogyakarta and a community leader of Sidomulyo (who often dealt with the officers of the Provincial Irrigation Agency).
father. He argued that he deserved it as he pioneered the invasion, and he wanted these plots for future investment.

Figure 4.12 Development of Lengkong in nine years (1999 – 2008). Source: drawing by author based on the map produced by participants of Informal Settlements Field Trip, University of Melbourne, 2007.
As happened in Bawah, the way these people invaded the land was often called rayahan, a Javanese term meaning collective seizure on the basis of first come, first get. Construction activity did not take place immediately; several months elapsed during which time they left the land open. Occasionally they used it for playing soccer and cow grazing. Such hesitation to initiate construction was because of the land’s unauthorized status. Later with the support from the kelurahan (sub-district) chief, these invaders attempted to negotiate with the municipal government to get the authorization. The municipal government refused to give authorisation but ambiguously suggested that they could not prohibit these people from carrying out the construction. My informant suggests that this advice was made in writing, but was unable to produce the letter. The invaders viewed such ambiguity as a form of quasi approval, which led to the gradual housing construction that commenced around 2001.

One of the first persons to construct a house was a resident of Kricak who was involved in the land subdivision at Bawah. Some of these people used the timber from the trees chopped on the site to construct their house, but had to buy it from the person who cut the trees. This indicates that the invasion involved not simply a territorial claim, but also the claim of resources within the claimed territory.

At the time of my fieldwork, new land invasion at Lengkong was no longer occurring. Property speculation is carried out in the form of selling, buying, and renting the existing land plots and houses, because all the available spaces have been fully occupied. The RT chief described, when he first arrived at Lengkong in 2002, the place had already become a structured neighbourhood like what we see in Figure 4.12c, but certainly with a lower housing density. However, Lengkong had not yet been authorized. The residents formed an association of households under the administration of RT 14, which seems related to the fact that the majority of the Lengkong population support their living by scavenging, and are part of the network of scavengers maintained by an owner of a recycling business who lived in Atas. The administrative authorisation of Lengkong as RT 25 was granted in 2005 (Figure 4.13),
which released Lengkong residents from the administrative dependency on RT 14, and also served as informal recognition of the right to the land.

Despite the existence of Lengkong since 2002, construction has occurred intermittently. Some started with the laying of foundations then temporarily halted, while others continued with walling and roofing. Once the funds were available, residents further appropriated and developed the buildings to a more permanent stage. However, it seems that such ‘on and off’ construction activity and the use of less permanent material was not only related to affordability. One informant suggests that some of them had decided not to live there. Thus their intention to build was to make the built forms as models, a form of mock up to invite potential buyers. Their initiatives seem to have worked well as currently only one early settler remains, while the rest are newcomers. However, many of these buyers did not end living there as they bought the land for speculation as well. Such a dynamic process of property transactions has escalated the land’s price over the years. Depending upon the position, a parcel of land sized approximately 5m x 7m, which cost Rp. 300,000 (A$ 37.50) in 2000 could be sold for up to Rp. 8,000,000 (A$ 1000) at the time of my interviews, which is more than 25 times increase in eight years.
After the authorization of Lengkong as RT 25 in 2005, the residents have been paying PBB (*Pajak Bumi dan Bangunan* - Land and Building Tax) annually, and many believe that if the state wants to evict them, they are due a substantial amount of compensation. The approval also marked the intensification of home improvement into more permanent construction, and the construction of public facilities such as public bathrooms and toilets, security post (*gardu*), and gate. All of which are seen to signify an attainment of greater tenure.

### 4.2. Tenure mapping

In order to understand the way in which tenure operates in Sidomulyo/Kricak, Table 4.1 sets the tenure structure based on methods described in Chapter 3. These category and structure, basically is an intersection of land and housing tenure. The three categories (own, rent, and use) are derived from the Basic Agrarian Law (BAL) discussed in Chapter 2. However, the table does not include mapping on building permit, as most of the houses have no permit. Yet data on building permits is hardly accessible, while field observation and interview suggest that people tend to pay lesser attention to the building permit issue than the legal land issue.

These tenure types are mapped in Figure 4.14 based on fieldwork conducted in February 2008, which surveyed 320 households (Table 4.2) in all RTs. Using the colour coding interpolated in tenure structure (Table 4.1), Figure 4.14 shows the distribution of tenure conditions over Sidomulyo an Kricak, which comprise five types based on resident’s relationship with the house. The first of these is right of ownership of house/land packages (Own/Own) marked in green, which occurs in Atas and is dominant in Kricak. It is the most secure tenure according to the BAL (Chapter 2) and UN tenure model (Chapter 1). Their entitlement to this land is based under the BAL system from when this was agricultural land. While there may be no formal building approval issued for the house, ownership of it and the land is relatively clear. If such house/land packages are rented out (Rent/Rent), they are marked in light green.

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20 *Resident is a person (usually the head of the family) who has the agreement with the property owner or holds the rights of property granted from the state.*
**Table 4.1** Tenure types in Sidomulyo and Kricak based on BAL and resident’s relationship with the property.


<table>
<thead>
<tr>
<th>LAND</th>
<th>HOUSE</th>
<th>TENURE CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OWN</strong></td>
<td>Rent</td>
<td><strong>OWN</strong></td>
</tr>
<tr>
<td>Rent</td>
<td>Use</td>
<td><strong>OWN</strong></td>
</tr>
<tr>
<td>Use</td>
<td></td>
<td><strong>OWN</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>OWN</strong></td>
</tr>
</tbody>
</table>

**Figure 4.14** Tenure mapping based on Table 4.1 (recorded in February 2008, drawing by author)
The second major type of tenure, Own/Rent (marked in dark green), is those residents who own their house (generally due to having built it) but on land that is rented from private owners. This is the case for most of the densest parts of northwest Atas where the homeless evictees moved in the 1970s. It is also the case of some parts of Kricak. This is what the locals often term ngindung, a land leasing practice whereby renters (pengindung) invest the cost of housing construction. These houses are the property of residents who rent the land and are aware of the fact that they must vacate the land at the end of the agreement. Interviews also suggest that the unwritten agreement is often fluid, meaning that the landlords could ask the renters to vacate the plot anytime, albeit with advance notice. Therefore, a renter who does not intend to buy the land in the future would prefer to use ‘temporary’ building materials, such as bamboo, wood sheet (multiplex), and makeshift materials. This will allow them to demolish the house quickly without losing too much capital. Many of them have been renting for more than one decade without changing the materials. The landlord will not normally permit permanent construction unless there is an intention to buy the land.

The two newer settlements of Bawah and Lengkong both have fundamentally different forms of tenure because the land is formally owned by the state. The

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Table 4.2 Household populations in the studied area (recorded by author in February 2008).

<table>
<thead>
<tr>
<th>Kampung</th>
<th>Area</th>
<th>RT</th>
<th>Number of household</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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21 The words ‘owned by the state’ suggest a common misunderstanding of the term tanah negara (state land), which is often seen as tanah milik negara (state owned land) by many Indonesian. As I have outlined in Chapter 2, both Struyk et al (1990) and a land expert I interviewed noted that the Basic Agrarian Law was created on the basis of a concept where the state has the Right of Control over the land. However, such right is not the same as ‘the state owning the land’ in the western notion of land tenure. It is based on Article 33 of the 1945 Constitution of Indonesia, which states that ‘land, water, and airspace are controlled by the state and exploited for the benefit of all the people of
Primary form of tenure here is Own/Use (marked in red), where residents own the house that they have constructed or purchased, but not the land, which is formally owned by the state. In other words, these people have squatted on state land without authorisation.

The final tenure type is where the house is rented on unauthorised land (Rent/Use) marked in pink. These tenants pay rent for the house yet the landlord does not formally own the land.

This tenure category system is thoroughly confusing and shot through with ambiguity. While it might appear from Figure 4.14 that the green areas to the north have a greater security of tenure, the dark green marks the site of the most intensive slum conditions and the least security in the case study area. These tenants own these houses but could be evicted by the private landlords at anytime. By contrast the informal ‘owners’ of Lengkong and Bawah have no formal tenure security but have built substantial houses and a considerable level of what might be called ‘perceived tenure’. These properties are often sold informally regardless of whether a house has been constructed. Some of these ambiguities and their relations with building morphology will be explored in the forthcoming sections of this chapter.

In Bawah and Lengkong, buyers of this ‘untitled’ property (the second cycle of owner and after) often have some transaction evidence in the form of a written document. Informal property transactions at Bawah and Lengkong have in recent years been recorded before the RW committee, a self-built monitoring system of informal property transaction established within these neighbourhoods. Newcomers cannot ignore this because the granting of a KTP (Resident’s ID Card) has to go through the RW committee, and the KTP is a key instrument to getting state and NGO infrastructure supports such as electricity and water connection, and home improvement funding. The absence of pengindung (land renters) in both Bawah and Lengkong (Figure 4.14) is because there is no land ownership there.

While Bawah is still being extended, the rest of Sidomulyo/Kricak seems to have been saturated, as no more unsupervised property is available for claiming. However, selling and leasing the existing property has characterised the dynamic of Indonesia’. This implies that the state cannot sell the land. The instruments to impose such Right of Control include city master plan and local codes.
tenure attainment within that area in recent years. Property transaction by *pengindung* to upgrade their tenure status by formally owning the land has become common. While such a strategy upgrades one’s security of tenure, it also challenges the prospect of improving the quality of living in the whole settlement. A member of the RW committee argued that land tenure legalisation would lead to the increasing number of landowners, which makes the installation of infrastructure in such a dense built environment more challenging. He gave an example of the hassle the community would face when they want to build a communal toilet, which requires them to use someone’s property for septic tank installation. When *ngindung* system was still fully operated, they could simply ask permission from one landlord. However, with many people buying their rented land, they would have to deal with more than one landowner to realise the plan. This implies that on the one hand formal ownership improves tenure conditions, but on the other hand the relatively small size of plots hinders the sanitation improvement initiatives. This situation might not occur if the plots used are still under the *ngindung* scheme, where only one person (the landlord) owns the land.

4.3. Morphological analysis

As described in Chapter 3, morphological analysis examines the morphology of ‘hard space’ (Trancik, 1986:61), to see to what extent such space contributes to the attainment of tenure security. This analysis examines three domains: building functions, built landscape components (gates, streets, and open spaces) and construction materials.

4.3.1. Building Functions

John Turner’s (1976) notion of ‘housing as a verb’ suggests that housing is seen as a process instead of a product of development, which involves the fundamental role of dwellers in the decision-making related to design and construction. Dwellers have the full authority in directing the production and appropriation of the built forms. They see the use value of housing as more important than its exchange value. In other words, the process of housing development corresponds to the process of tenure attainment. In informal settlements such process is often expressed through
the existence of non-residential functions. These functions reflect a sense of collectiveness, which can only be achieved after the residents’ social cohesiveness reaches a certain level of stability. In this analysis the functions of the non-residential built form are categorized into gathering halls, educational, and commercial facilities.

![Figure 4.15 Fisabillah mosque with a newly painted community-based school for Muslim children in the foreground (photo credit: author, 2008)](image)

Religious buildings were among the first community gathering halls to exist in Sidomulyo/Tungkak. As mentioned previously, the Protestant church at Atas was established in 1977, a year after the demolition of the homeless barrack and the moving in of the evictees. This church sits on a parcel of land donated by one of the house owners in RT 14. Similarly, Fisabilillah mosque also located in Atas (Figure 4.15) on a Waqf\(^{22}\) land donated by one of the informants, and was built in 1990 by the community through self-help construction. The co-existence of this mosque with the church at a very close proximity (see map in Figure 4.17) suggests that religious difference is not a problem in this community\(^{23}\).

Other gathering halls are *Balai RW* (RW hall) in Sidomulyo and *Balai RT* (RT hall) in Kricak. The Sidomulyo RW hall (Figure 4.16 Right) represents a collaboration by all the Sidomulyo residents (Atas, Bawah, and Lengkong) in realising their plan of building a place that could accommodate various community needs, such as interaction with community leaders, exchange of information, and storage of the

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\(^{22}\) *Waqf* is an Arabic term denoting a piece of endowment land donated by the owner for social purposes (under the Islamic tenure system).

\(^{23}\) Mosque and church located in the same neighbourhood is a very rare case in Yogyakarta.
community’s assets. However, the building stands on unauthorized land. Similarly, *Balai RT* (RT Hall) of Kricak (Figure 4.16 Left) stands on top of a gully, which is also unauthorised. Unlike the RW Hall of Sidomulyo, the RT Hall of Kricak represents the community collaboration at a RT level, which highlights the strong community independence at Kricak but also the strong segregation between Sidomulyo and Kricak as well.

![RT 35 (Kricak) community hall (photo credit: author, 2008)](image1)

![Sidomulyo RW office and gathering place (photo credit: author, 2008)](image2)

**Figure 4.16** Gathering halls.

An educational presence can be seen through the establishment of a TPA - a community school focussed on training the Sidomulyo children in reading Al Qur’an. The building is located in front of the Fisabilillah mosque (Figure 4.15), but training and other activities for Kricak youth usually took place in the Kricak community hall (Figure 4.16 Left). While each of these youth activities might be seen as a collective progress in identity strengthening, the separation of venues might also be construed as social segregation between Sidomulyo and Kricak.
Figure 4.17 Atas: functions of the built forms in January 2008 (drawing by author).

Figure 4.18 Kricak: functions of the built forms in January 2008 (drawing by author).
Commercial functions occur in the form of retail shops (warung), which are mostly attached to a house (Figure 4.21 Left). Figures 4.17 to 4.20 suggest that these functions can be found in all parts of the kampung (Atas, Bawah, Lengkong, and Kricak). One commercial function linked to industry is rock crushing, which is located
at Atas (Figure 4.21 Right). In the past, this industry was the main source of income for Kricak residents, and it was one reason why the settlement was named ‘Kricak’ (crushed rocks). Another industrial function is recycling business, which occurs in Atas and Lengkong (labelled ‘home industry’ in Figures 4.17 and 4.19). This industrial activity significantly contributed to the formation of Lengkong, as owners and renters of houses were mostly engaged in scavenging for livelihood.

![House and warung (photo credit: Yoshi Murti, 2006).](image1)

![House and rock crushing work space (photo credit: author, 2008).](image2)

**Figure 4.21** Functional-mix of residential and commercial spaces.

4.3.2. **Built landscape components**

Built landscape components consist of gates, streets, and open spaces. As discussed in Chapter 3, gateway marker of a neighbourhood in urban Java typically occurs in the form of gate (*gapura*) and/or security post (*gardu*). They often exist separately or co-exist in close proximity. The gate is an explicit marker of an RW or an RT (Chapter 2). The name of an RT is usually carved or painted on its surface (Figure 4.22 Left). In the area where tenure is highly ambiguous, such as Bawah and Lengkong, the gate and security post can signify the progress of tenure attainment. The gate and security post at Lengkong (Figure 4.22 Right) for example, were built after this neighbourhood was authorized as RT 25, while the gate at Bawah (Figure 4.22 Left) was also constructed after this neighbourhood was formally annexed to RT 16.

A sign is often placed near the entry access of the neighbourhood to control the traffic and pedestrian behaviour such as the sign placed next to the *gardu* in Atas.
Speculative Settlements: Built Form/Tenure Ambiguity in *Kampung* Development

(Figure 4.21 Right) conveys a similar message to that of Bawah (Figure 4.22 Right). The sign at the gate of Bawah says, ‘*Tamu harap lapor 1 x 24 jam*’ (‘Guests must report within 1 X 24 hours’), which asks the guest to report to the RT chief if he/she wants to stay more than 24 hours. Likewise, the sign placed on Lengkong’s entry (white circle in Figure 4.22 Right) says, ‘*Mesin dimatikan jam 21-05*’ (‘Switch off engine between 21.00 – 05.00’), which ask motorbike riders to switch off the engine at the above time, and suggests that motorbike is the only motorized vehicle allowed to enter the neighbourhood. These signs are common in urban Indonesia, as during the reign of New Order regime, they were parts of the institutionalised neighbourhood security system, which later became embedded in the everyday life of *kampung* residents. The main function of the security post is to accommodate night-watch activity. The security post is also a venue for hangout and occasionally buying-selling groceries.

Gates, security posts, and all the signs mentioned above demonstrate Habraken’s (2000) claims that ownership is not always congruent with control. Residents of Bawah and Lengkong clearly do not legally own the lands, but they have taken control of these lands for years. The capacity to take such control can only be achieved after they have gained *de facto* secure tenure.

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An entry gate at Bawah (photo credit: YPR, 2006)  
Gardu (security post) at Lengkong and a sign (white circle) to control the incoming/outgoing guests and vehicles (photo credit: author, 2008)

*Figure 4.22 Gapura (gate) and gardu (security post).*

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24 The lane is too narrow for a car to move through.
Other parts of the built landscape are street and lanes, which assure permeability to the settlement. The footprint map (Figure 4.23) shows that Sidomulyo and Kricak are highly permeable through the existence of municipal streets that link the *kampung* to the main street in the eastern and southern directions, and to a gated real estate development in the west. Permeability is also possible with the almost through space between buildings, which characterizes the landscape of Sidomulyo/Kricak.

The municipal street in combination with the river and gully, have sharpened the spatial divisions between Atas, Bawah, Lengkong, and Kricak. The segregation is further sharpened by the placement of an entry gate in Bawah and Lengkong as discussed above. Bawah is administratively part of RT 16, but the residents have built a gate (Figure 4.22 Left) that shows an increasing concern for neighbourhood security. It can also be read as a move towards independency, as they plan to separate from RT 16 after the 2009 general election, an indication of the growing confidence to become an independent neighbourhood.

A similar phenomenon is found in Lengkong, whereby the residents built a gate and a security post to mark the existence of such an invisible enclave (refer to Figure 4.40). Lengkong is situated behind a retaining wall built by the state, which makes the settlement unnoticeable by people passing through the municipal street. The gate and security post function not only as an expression of place identity, but also an indication of higher permeability in addition to higher tenure security, as they were built after the administrative authorization in 2005.

The footprint map (Figure 4.23) also indicates the height of buildings as some residents expand their houses vertically up to three storeys, to accommodate growing functional needs. A similar phenomenon has begun to occur in Lengkong as well - an indication of the growing confidence in continuing the property investment despite unauthorized land status.
4.3.3. Building materials

With regard to the local codes on the use of materials for building construction, Chapter 3 suggests the division of building types into three categories linked to the sense of permanence, namely permanent construction (brick/concrete blocks), semi-permanent (half brick-half bamboo/timber), and temporary (bamboo/timber frame and partition). The term ‘temporary’ indicates a temporary stage of room shelling, while ‘permanent’ is often referred to as the final stage. But this is not meant to be a rigid categorization, as changes might occur at any stage.

To understand how tenure links to building materials, Figure 4.24 maps the distribution of the above types of building materials over Sidomulyo and Kricak. The map reveals that the link between a sense of permanence and the authorized/unauthorized status of the land is not significant. In Figure 4.24 we can see that despite the unauthorized land status over Bawah and Lengkong, none of ‘temporary’ building materials occur in these neighbourhoods. In Lengkong, all buildings fall within the permanent category, while in Bawah the semi-permanent category occurs only on two buildings, and the rest are permanent.
So why are semi permanent and temporary categories of building materials occurring dominant in parts of Atas and Kricak, regardless of their authorized land tenure? Clearly these concentrations of temporary tenure are linked to the ngindung tenure type where houses are built and owned under conditions of relatively formal but insecure tenure. Even with the authorized land status in both Atas and Kricak, the renters maintain the ‘temporary’ quality of their houses (Figure 4.25 Left), while unauthorized property owners in Lengkong have constructed their houses using ‘permanent’ materials (Figure 4.25 Right). This indicates that for Lengkong residents, the state has not been regarded as a serious threat to their tenure, as these residents do not have any agreement with the state. In contrast, land renters in both Atas and Kricak have agreements with the landlords that they must vacate the land when the agreement expires, and those landlords figure largely in their daily life. Therefore, the close proximity to agents who have the power to control the territory seems to have contributed to the instability/insecurity of tenure.
4.4. Utilities and services

Appropriation of utilities and services is an inseparable element of tenure improvement because such interventions influence the attainment of de facto tenure. As discussed in Chapter 2, the interventions occur in the form of support from the state or NGOs in infrastructure upgrading, which include electricity and water connection, construction of public bathroom/toilets, and street pavements.

4.4.1. Electricity connection

In Sidomulyo and Kricak, electricity connection has to be obtained either from the authorized system established by the state or by tapping into a neighbour’s electricity meters (shared bills). Some residents also tapped electricity from the public buildings. Within the formal system, the requirements for obtaining state electricity connection from PLN (Perusahaan Listrik Negara – State Electricity Company) obviously do not include any evidences related to land tenure. However, while authorised electricity connection has existed all over Sidomulyo and Kricak regardless of the tenure status of the property, a large number of households have been illegally tapping the electricity supply from neighbours’ houses or public buildings. This is because the cost of getting a new connection is not always affordable. There is often only one electrical pole available in the neighbourhood, and the cost of installing new poles has to be paid by the applicants. A member of the RW committee explains:
I don’t understand why the [electricity] contractor was daring enough to install an electricity meter and the connection in each house, knowing that only one pole was available in this area. I think they have violated the regulation, as if I am not mistaken one pole can only handle 10 houses, while we have more than 100 houses here.

The number of houses having no electricity meters is presumably more than 100. This means that the actual consumption of electricity far exceeds the maximum power allowed by PLN for this neighbourhood. In RT 14 area for example, the number of households owning an electricity meter is 18, while the number of households tapped into the power is 36. This means that the maximum authorized consumption is equal to approximately 23,400 watt but the tapping has far increased the consumption to approximately 46,800 watt, which is double the authorized amount.

How is such an electricity issue linked to tenure? Detailed mapping of the electricity network for the whole settlement was not possible because of its complexity and lack of knowledgeable informants. But I had the opportunity to make detailed maps of at least four samples of the electricity network: the area of RT 14 (Figure 4.26), Kricak (Figure 4.27), Lengkong (Figure 4.28), and Bawah (Figure 4.29). Each mapping was conducted with the assistance of a licensed electrician living within the mapped neighbourhood. These cases show that the term ‘shared electricity’ does not imply an equal relationship, as there is a hierarchy that differentiates the conditions into two types: ‘supplier’ and ‘recipient’. Supplier is a household who formally owns the electricity meter, while recipient has no electricity meter, and obtained electricity supply from the supplier. The way supplier calculates the monthly bill is not based on the amount of power used, but instead, is based on the types and number of electrical appliances existing in the recipient’s house. Thus, the amount of the (shared) bill paid by the recipient is not precise. A problem that often occurs is where one taps the electricity supply from a public building, for which the control of usage (by the RW committee) is often unclear, and is often resulting in the electricity bill being paid by the community.
The involvement of licensed electricians in establishing all of these connections show a highly rhizomic system of electricity network operates in this kampung. The mixture of formal/informal is not limited to the way the hardware parts are connected to each other, but also the role of a licensed (formal) electrician who conducted unauthorised job.

In Kricak, apart from common informal electricity sharing among neighbours, two houses tapped electricity from a security post (Figure 4.27). Such uncommon practices often created disputes between these tenants and their neighbours.
Interview suggests that the tapping made the calculation of monthly bills of such a public facility complicated. The practice of shared electricity shows that territorial control spans beyond the boundary of one’s actual living space. Recipients have a subordinate position in terms of electricity control because their day-to-day electricity consumption is dependent upon the authorised owner of electricity meter.

By comparing Figure 4.26 (West of Atas) with Figure 4.27 (Kricak), we can see that RT 14 has more recipients of electricity than Kricak. One apparent cause is due to the high number of *pengindung* in this neighbourhood, which tend not to spend too much for investment in home improvement.

![Diagram of electricity network in Lengkong](image)

**Figure 4.28** Electricity Network in Lengkong (mapped in January 2008).

As indicated by the number of suppliers (marked in yellow) electricity connection in Lengkong is largely authorised (Figures 4.28), while the number of suppliers in Bawah is more than 50 per cent of the total population (Figure 4.29). While the status of supplier is often linked to the higher levels of formal and perceived tenure, there is no evidence here to suggest that resident pursue formal electricity connections as part of quest for tenure25. This is however a system involving considerable levels of social capital26, the electricity network becomes a

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25 As described in the application requirements for obtaining electricity connection from PLN (Chapter 3), applicant does not require to supply any legal documents relate to his/her residence except the citizen’s ID Card (KTP).

26 Social capital, according to Bourdieu, ‘is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition’ (Bourdieu, 1986:248). Levels of social capital can thus be defined as the capacity to obtain the above resources. The more capacity one has to obtain such resources, the
social network through the need to know about the client’s appliances in order to split bills and so on.

Figure 4.29 Electricity network in Bawah (mapped in January 2008).

Figure 4.30 Electricity network superimposed on tenure map (Figure 4.14).

higher level of social capital he possess. In Bourdieu’s term, this notion is called ‘volume of the social capital’ (Bourdieu, 1986:249), which relies on how much resources one can ‘effectively mobilize’ (Bourdieu, 1986:249).
Figure 4.30 maps these supplier and recipient against tenure, and show that both owners and renters may be the supplier or recipient of electricity. We can also infer that in all the mapped areas (RT 14, Kricak, Lengkong, and Bawah) a number of house renters and *pengindung* are willing to invest in formal electricity connection. This shows a confidence to maintain their existence in this kampung, and I would argue that such a phenomenon could be construed as a progress towards the attainment of secure tenure.

4.4.2. *Water and sanitation*

Unlike electricity supply, water supply does not necessarily rely on the state established system, as residents of Sidomulyo/Kricak have a long tradition of using the river as their primary water supply. Formal piped water supply is obtained through a local government-owned company – the PDAM (*Perusahaan Daerah Air Minum* – Municipal Drinking Water Company). But unlike that of electricity supply, the applicant for water connection is required to provide information about the tenure status of his land. Although no reason is mentioned in the application form regarding such requirement, the PDAM delivers water through ground piping, which requires ground excavation for pipe installation.

Figures 4.31 to 4.33 show the position of buildings with the state water supply superimposed on tenure map, which indicate that buildings with state water supply exist only in Atas and Kricak where the land is authorised. Unlike the state electricity supply, which can be enjoyed by the majority of households, very few households in Atas and Kricak can afford to obtain this facility. They have been relying on self-built wells or public bathrooms. Public bathrooms also rely on public wells, which use either bucket and rope or electric pumps to deliver water into the reservoirs.
Figure 4.31 Water and sanitation map in Atas.

Figure 4.32 Water and sanitation map in Kricak.
Construction of public bathrooms/toilets and street pavement are often part of the state intervention, which in Sidomulyo/Kricak occurs through the implementation of government-channelled grants such as NUSSP (Neighbourhood Upgrading and Shelter Sector Project) and P2KP (Program Penanggulangan Kemiskinan di Perkotaan - Urban Poverty Alleviation Program). These programs, as discussed in Chapter 3, are initiated as a result of inter-departmental and private sectors collaboration, coordinated by the Ministry of the Public Works. NUSSP focuses on neighbourhood infrastructure upgrading, while the P2KP focuses on poverty alleviation. However, neither program includes authorization of land and building tenure in their funding application. This can be seen in the implementation of public bathrooms construction in Bawah and Lengkong, where the main requirement for obtaining these grants is a submission of a proposal indicating the priority of community needs and what contribution the community can provide as its share in the project. While the aim of P2KP is different from NUSSP, Figure 4.34 shows that the end results of these programs are the same: public bathrooms.
In summary, very few of the houses in the case study have formal water supply and none of these are in Lengkong or Bawah. This is clearly because water has been connected to formal tenure, water then becomes a signifier of tenure. In this framework, the state supply of public bathrooms in Bawah and Lengkong tends to indicate a form of state authorisation that helps to legitimate these settlements.

4.5. Everyday life
This section describes residents’ activities in everyday life, which I consider as important factors in strengthening the collective identity of the neighbourhood, and could have implications to tenure attainment. I confine these activities as those that relate to ways in which residents collectively maintain their existence as agents that routinely control the territory.

The first activity observed is night patrol (ronda), a neighbourhood watch conducted by a group of (male) residents of each RT. In total six groups operate nightly across Sidomulyo and Kricak, which corresponds to the total number of RTs. Members of these groups have to take turns in patrolling, thus the number and
identity of members are not always the same. Besides conducting surveillance, the main task of these people is to collect ‘security money’ (*jimpitan*)\(^{27}\) placed by each household in the small coin box, usually hung near the front door with a pad that records the amount of money (Figure 4.35 Left). The money is not intended to cover the cost of patrolling, as this activity is voluntary, instead it is counted as the household’s contribution to neighbourhood maintenance. The patrolling team would usually begin collecting the money from around 8 pm until about 10 pm, thereafter they would spend the rest of the night hanging out at the security post, as depicted in Figure 4.35 Right.

![Security pads and coin boxes](photo_credit: author, 2007)

**Figure 4.35** *Ronda* (night patrolling) in Lengkong.

\(^{27}\) *Jimpitan* is a Javanese term. Literally it means hand picked rice placed in a cup, collected and sold to get the money for the community’s needs. But nowadays people use money to replace the function of rice.
Lengkong: A wedding organized on a narrow lane and vacant plot (photo credit: Yoshi Murti, 2006).

Drying clothes along the bridge railing between Sidomulyo and Kricak (photo credit: author, 2008).

**Figure 4.36** Social activities in the neighbourhood.

The amount of money collected is not the same every night, and varies from RT to RT; the minimum amount is Rp. 200 (A$ 0.025) but there is no maximum limit. At Lengkong for instance, one household contributes at least Rp. 6,000 (A$ 0.75) per month. On average, the amount of money collected from 30 households is Rp. 170,000 (A$ 21.25) per month. The money collected is submitted by the group leader to the RT chief at the monthly community gathering conducted in the first week of the month. The RT committee then uses the money, often called the ‘development fund’ (*uang pembangunan*), to cover neighbourhood maintenance, such as garbage collection and cleaning the public facilities. Construction of gate and security post (Figure 4.40 left) was also financed by this fund. Such a monthly meeting is an example of an indoor activity organized on a rotating basis, which is moving from one household to another.

This meeting becomes a venue for collecting other monies as well, including but not limited to funeral funds. These extra monies are submitted to the RW committee in the second week of the month. The funeral fund is an important component in the everyday life of Sidomulyo and Kricak residents for two reasons. First, land for the dead cannot be claimed informally, which means that people have to bury the dead in the public (formal) cemetery. Second, the cost of burying the dead in a public cemetery is not usually something that people can afford to pay immediately (on the day of funeral), and so the funeral fund was established to allow
every resident from whom money is collected to help each other at such unexpected moments. As a member of the RW committee explained:

In the case of funeral, ladies usually organize a taskforce to collect rice. The RT committee would donate Rp. 100,000 taken from the ‘development fund’, while the RW committee provides Rp. 700,000, a fund allocated for ‘bedah bumi’ (earth digging). This money is important because quite often people could not immediately bury the dead, just because they had no money. And in the city the minimum amount we have to pay for burying them is Rp 750,000, whereas you know, death is an unexpected event, no preparation. In the event of a funeral, raising money up to Rp 500,000 is hard. So, every household in this RW is obliged to contribute Rp. 1,500 per month for the funeral fund. This helps them to finance the burial. You know, maybe for the rich that amount is nothing, but for us here, it is a lot. People often have to borrow money to bury their relatives.

Other activities are the incidental public and private gatherings, which mostly take place on the streets because all the public buildings are usually too small to accommodate those attending. An example of an annual public gathering is the Independence Day celebration, which is usually carried out on the main street along the Karangrejo Bridge (Figure 4.36 Right) towards the west. To run this event, the community often have to collaborate with the local police to divert the traffic. On a smaller scale, closing the public lanes is common when a household organizes a private function such as wedding (Figure 4.36 Left) and family gatherings. A funeral ceremony might also result in closing of the lanes.

Besides the public activities, private activities carried out collectively were also observable. One of them is washing and drying clothes, which often took place in public areas, particularly on the riverbank near Karangrejo Bridge. The washing usually occurred in the morning and people dry their clothes along the bridge railing (Figure 4.36 Right), without worrying about possible theft. Since the bridge connects Sidomulyo with Kricak, the clothes being dried along the bridge railing can be construed as ‘semi-fixed elements’ (Rapoport, 1982) that reflect the traces of social encounter between the two contested kampung. This daily washing and drying activity has been occurring since the early existence of Karangrejo Bridge in the mid 1980s.

In addition to the residents’ activities discussed above, there are commercial activities that routinely occur on the same location everyday mostly on the main
street. These activities occur not only within the fixed built forms but also in the non-fixed built forms, such as the movable food stall that always stops on the same location. For instance, an informant who pioneered the development of Bawah has been managing his food stall with his wife for over a decade on the same location. His food stall is located in front of the Kricak RT hall (Figure 4.37). It serves cheap dinner and take-away food, including tea and coffee, and usually opens in the late afternoon until late night.

In summary, everyday life in Sidomulyo and Kricak includes collective activities from the routine night patrolling and the collection of funeral funds to incidental festivals and family gatherings, which reflect the dynamic of spatial control in these kampungs. Night patrolling (ronda) would not take place without an established organization. Although night patrolling has been institutionalised by the New Order regime as part of the neighbourhood security system (siskamling), this activity can only be carried out after the community reaches a consensus about how they should defend their places against intruders, and how they should manage monies collected every night. While the emergence of such a security system might not directly relate to resident’s tenure attainment, it suggests a greater stability of place identity and continuity of habitation.
4.6. Current changes and upgrading

Changes as a result of the construction of built form and upgrading the existing one have occurred from time to time, through both state/NGO intervention and the community’s self-help. One example is the disappearance of public activities as a result of access blocking. A comparison of the footprint map of Sidomulyo and Kricak produced in January 2008 (Figure 4.38) with the map produced in September 2008 (Figure 4.39) shows decreasing access to open space for public activities - a result of the increasing density of the built environment in both Atas and Lengkong and the closing of access to state lands, following the state’s confinement of this land by walls (Figures 4.39) thus rendering these properties impermeable.

The land status map created by BPN (National Land Agency) suggests that all the lands used for public activities in Sidomulyo/Kricak belong to either private individuals (either formal or informal) or to the state; thus these public activities have so far taken place with the landowners’ tolerance, for example the use of state land adjacent to Lengkong for a soccer field (Figure 4.40 Left), and the open space inside the Bina Karya Rehabilitation Centre for multi-purpose activities (Figure 4.41 Left), and the use of private property for various small-scale public events. However, the increasing density of housing and the closing of public access by the authorities (Figures 4.40 Right and 4.41 Right) have made these spaces impermeable and led residents to find alternative ways to accommodate their public activities, for example by using private space for public gathering (Figure 4.42 Left) or even using the river as a playground (Figure 4.42 Right).
Figure 4.38 Footprint of Atas and Kricak mapped in January 2008, before the constructions of the Bina Karya security wall (drawing by author).

Figure 4.39 Footprint of Atas and Kricak mapped in September 2008, showing a new wall constructed around Bina Karya (drawing by author).
Another external intervention is the upgrading of housing in Atas and Bawah, whereby an NGO plans to upgrade 50 houses in one year using some funds received from a Chilean-based donor. Survey conducted in September 2008 shows that 18 houses had been upgraded (one example is depicted in Figure 4.43). An informant representing this NGO, states that the selection of beneficiaries was based on the recommendation from RT leaders and a community facilitator. As the main selection criterion, the condition of the beneficiary’s house has to be in a state of deterioration in terms of building materials. As a result, all beneficiaries from Atas were pengindung, because as part of their agreement with landlords they
constructed their houses using ‘temporary’ material, while none of the Lengkong residents were included on the list of beneficiaries.

The use of rock crushing area for public event such as youth activity (photo credit: YPR, 2006)

The river becomes an alternative venue for youth gathering (photo credit: YPR, 2006)

**Figure 4.42** Youth events on public spaces.

Before upgrading (photo credit: Natalie Kirschner, 2007)

After upgrading (photo credit: author, 2008)

**Figure 4.43** NGO-funded housing improvements.

Depending upon the existing condition of a house, the amount of money granted ranges from Rp. 3,500,000 (A$ 437) to Rp. 8,000,000 (A$ 1000). But the
money was not given directly to the beneficiaries; instead it was disbursed in the form of building materials and payment for labour.

While the money is a full grant, beneficiaries are obliged to save a minimum Rp. 1,000 (A$ 0.12) per day in the newly formed cooperative, which will be further developed into a Credit Union. However, since rules for this program were still under preparation at the time of the interviews, it was not clear whether or not such an obligation would last until the saving reached the same amount as the grant received by each beneficiary. According to an informant, such a fluid scheme was developed to avoid jealousy among those who were not eligible to receive assistance. Moreover, it is intended to create a sense of belonging to the house for the beneficiaries, while establishing access to credit through the formation of a cooperative to build their financial strength. Thus, the savings program is actually regarded as a form of ‘quasi-loan payback’, as the money will not be returned to the donor.

The improvement project allows tenants to live in more decent housing without having to spend money, but the fact that all the 18 beneficiaries are land renters can lead to a perception that the landlords might see this project as an investment opportunity by treating the newly upgraded house as a fixed asset, which means that they will have a better house when the leasing agreement ends, instead of getting the vacant land back as normally expected in this type of leasing agreement.

Other examples of intervention are community halls at Bawah (Sidomulyo) and Kricak, which were built through organized self-help. The Sidomulyo RW hall (Figure 4.44 Left) was established in early 2000 with the fund coming from all the residents of Sidomulyo (Atas, Bawah, and Lengkong), but external intervention occurred in the latter stage of construction. As an informant puts it:

Each household must contribute Rp. 10,000 to initiate the construction, but when the general election took place we used the moment for fundraising. For instance, there was a parliament member living at Atas. We negotiated with him before the election took place. I asked him ‘What would you contribute if we select your party?’ I mentioned it not for my own need but for the community. The second event was the mayoral election. We invited the mayoral candidate to inaugurate this building, while asking for his contribution.
The inauguration of this RW hall was not simply an event where they raised money for further construction, but most importantly the community used it as a means to make the building legitimate by asking the mayoral candidate to sign the inauguration tablet (Figure 4.44 Right), which indeed gave a strengthening effect to the continuing existence of the hall on such an unauthorized site.

**Figure 4.44** Sidomulyo RW Hall.

While the Sidomulyo RW hall represents a collaboration of the whole of the RW residents, Kricak RT Hall (Figure 4.45 Left) exists as a result of collaborations of
only the RT residents. The building stands on top of a gully, constructed through partial funding from a French-based donor facilitated by a local NGO. At almost the same time as the inauguration of Sidomulyo RW hall, another mayoral candidate inaugurated the RT hall of Kricak by signing a tablet as well (Figure 4.45 Right). This can be read as not only a form of identity strengthening, but also a contestation of power between each of the mayoral candidates and between the community of Sidomulyo and Kricak.

In addition to the above interventions, individual self-help construction of built forms continues. Observation of ‘before’ and ‘after’ conditions between July 2007 and September 2008 shows an increasing density of the settlement as a result of new housing construction (Figures 4.46a and 4.46b) and the continuation of an
existing house construction (Figures 4.46c and 4.46d). New housing construction on the one hand implies increasing tenure stability, but on the other hand it can have a destabilizing effect on the existing functions of private open space as a place for public activities.

To sum up, external interventions in the appropriation of built forms can be read as a public acknowledgement of the legitimacy of residents’ collective efforts to maintain their control over the area they have territorialized. External intervention in the case study area for the development and improvement of infrastructure, and the construction and improvement of public buildings occurred through participatory approach in the form of decision making and burden sharing, which could only take place if tenure is secured.

4.7. Discussion

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>1965</td>
<td>Eradication of PKI (Communist Party of Indonesia)</td>
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<tr>
<td>1966</td>
<td>Construction of barrack for the homeless</td>
</tr>
<tr>
<td>1976</td>
<td>Demolition of barrack, eviction of residents, and densification of Atas</td>
</tr>
<tr>
<td>1977</td>
<td>Construction of a church in Atas</td>
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<tr>
<td>1978</td>
<td>Densification of Atas led to the split of an RT</td>
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<tr>
<td>1980</td>
<td>Invasion of Bawah started</td>
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<tr>
<td>1983</td>
<td>OPK (Operation of Crime Eradication)</td>
</tr>
<tr>
<td>1984</td>
<td>Flood devastated Atas</td>
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<tr>
<td>1985</td>
<td>Construction of Karangrejo bridge</td>
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<tr>
<td>1989</td>
<td>Implementation of RT/RW system and integration of Atas to Sidomulyo</td>
</tr>
<tr>
<td>1990</td>
<td>Construction of a mosque in Atas</td>
</tr>
<tr>
<td>1999</td>
<td>Invasion of Lengkong started</td>
</tr>
<tr>
<td>2003</td>
<td>Administrative authorisation of Bawah</td>
</tr>
<tr>
<td>2005</td>
<td>Administrative authorisation of Lengkong</td>
</tr>
<tr>
<td>2008</td>
<td>New invasion in Bawah</td>
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Figure 4.47 Key events in Sidomulyo/Kricak development

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28 Figure presentation inspired by the work of Mukhiya (2003).
Having examined the development of *kampung* Sidomulyo/Kricak, some lessons can be drawn with regard to the development of this *kampung* from the early days up to its present state. To begin with, I want to use the ‘environmental game’ model (Habraken, 2000) outlined in Chapter 3 to discuss the findings outlined in the preceding sections. In this model Habraken proposes three components that constitute the making of built environment: *physical order, territorial order,* and *understanding among agents* (codes).

Historical analysis (Sections 4.1) suggests that Atas was formally part of Kricak territory when the RT/RK system was still functional in Yogyakarta. At the time all the area of Kricak was a ‘formal’ *kampung,* as the status of land occupation was legal. But the 1976 demolition of the homeless barracks located on today’s site of Bina Karya (Section 4.1.2) changed the territorial order of the settlement since the ex-homeless people (who became homeless again after the demolition of their accommodation) offered a prospect of property speculation to the landlords of Atas. To attract these evictees to lease the lands, these landlords chose *ngindung* (land lease) as their approach. For these landlords, land lease was the most cost-effective approach to make profit, as they did not have to invest in building construction.

Once these evictees agreed to accept the terms and conditions of *ngindung,* a new physical and territorial order emerged. New groups of makeshift housing built by these evictees co-existed haphazardly with the existing permanent housing of the landlords. This marked the significant emergence of informal urbanism over this *kampung,* a form of *equilibrium* in Habraken’s (2000) terminology, as a result of an understanding among the actors of the rules of the environmental game.

Nevertheless, *equilibrium* in this case does not mean a stable state, because land renting is perceived as a temporary stage of tenure attainment. In other words, the settlement is in the state of ‘becoming’ (Deleuze and Guattari, 1987). The development of Bawah and Lengkong is evidence of how these *pengindung* (renters under *ngindung* system) sought permanence by gradually territorializing the vacant escarpments of the riverbanks. This is a movement from an Own/Rent to Own/Use tenure structure. Such territorialization, however, is not their final goal because at present among 31 households of Lengkong, only one of the original residents remains. The rest of the properties have been sold or put up for lease.
Similarly at Bawah, none of the 29 households are the original invaders; they are all buyers or renters. The developments of Bawah and Lengkong can thus be regarded as informal property speculation, comparable to that of property development by ‘formal’ developers. Some used the money to change their status from renter to owner, by buying the property they rented. Thereafter, they applied for a certificate of right of building (*hak guna bangunan*) from the state, which explains that one reason for informal property speculation is to gain capital to improve tenure.

However, while legal tenure is still the ultimate aim of tenure seeking in this *kampung*, such legal tenure is not a prerequisite to gain the security of tenure. This notion can be understood by looking at the quality of building materials in order to describe their levels of permanence. In semiotic terms, the permanence levels in building materials can be regarded as a signifier of tenure level. By this I mean that permanent materials (e.g. brick and concrete) might signify a higher tenure level than temporary or less permanent materials (e.g. bamboo and makeshift items). An example is the comparison of building materials quality between houses in Lengkong or Bawah and the *pengindung* houses in Atas and Kricak (Section 4.3.3). The former, which exist on unauthorised land, are all made of brick and concrete, while land renter’s houses at Atas are mostly made of bamboo or makeshift materials, albeit they stand on authorised lands. Such conditions show that despite their legal tenure, the land renters in Atas have a lower level of security of tenure than informal house owners in Bawah and Lengkong. By contrast, informal property owners in Bawah and Lengkong have no one to control their rights. For Bawah and Lengkong residents, the state is an abstract agency. The state has no tangible presence in the lives of informal property owners at Lengkong, in comparison with the landlords at Atas who exert (everyday) control over the existence of land renters. Therefore, for Bawah and Lengkong residents, the state is a distant threat, a political organisation in the environmental game. This process of speculation can be seen through the position of RT/RW chiefs.

We may argue, based on the governance structure outlined in Chapter 3, that RT/RW chiefs are the representation of state, because the formal legitimacy of one’s
identity in Indonesia starts in the RT\textsuperscript{29}. However, it should be noted that RT/RW chiefs are not part of the formal government structure, as the lowest level of government officers is sub-district chief (kelurahan). In addition, RT/RW chiefs carry out their tasks on a voluntary basis. The RT/RW committees can move from representing the state to representing the community, depending upon the conditions and demands. In the case of neighbourhood physical improvement, such as construction of public bathrooms in Lengkong and Bawah and improvement of pengindung houses in Atas, the RT/RW chiefs put themselves as representative of the community who negotiate for assistance from the outside.

With regard to the built form, the kampung consist of not only residential buildings but also public buildings and infrastructure. Public buildings in Sidomulyo/Kricak were all constructed by means of community self-help\textsuperscript{30}, although the funding may have partially come from outside (state or NGO). In other words, these buildings emerged after the community reached a position where they have the capacity to consolidate themselves through, for example, the night patrolling activities carried out while collecting financial contribution from the households. In Gidden’s (1984) words, such financial contributions can be seen as an achievement, to some extent, of ontological security, as the households were able to overcome the threats that might prevent them to live on unauthorised property. In DeLanda’s (2006) assemblage theory, the emergence of these public buildings suggests an act of boundary sharpening - a form of identity stabilisation and territorialization. Gates and security posts at Bawah and Lengkong, which were built after the administrative (RT) authorization, herald the community’s achievement of more secure tenure. These built forms reflect the community’s confidence in exposing themselves as ordinary residents, as well as demonstrate their capacity to operate control over the built environment they have developed. Therefore, as Habraken (2000) has argued, ownership does not imply control. Under the BAL, the state owns the right to control over the sandbank area where Lengkong is located. But the \textit{de facto} control is in the hands of the residents of Bawah and Lengkong, who operate it without state

\textsuperscript{29} The application process to get a KTP (Resident’s ID Card) starts from RT level.

\textsuperscript{30} Self-help means that the decision-making mainly relied on community participation, although the community might hire people for the implementation of such decision (see Turner, 1976).
authorization. Thus what the UN’s calls de facto secure tenure has been largely achieved in these neighbourhoods.

While the state power to control the property does not directly exist in Bawah and Lengkong, such power circulates within the built environments through infrastructure upgrading, which Guinness (2009) calls ‘formalisation’ (Chapter 3). Construction of public bathrooms and toilets, and installation of electricity meters are examples of this. However, ‘formalisation’ in Sidomulyo/Kricak is not a top-down process, nor a deliberate state plan to exert control in the settlements through development assistance, as Bayat (2004) has argued (Chapter 2). Instead such formalisation was a demand-driven process. For example, the installations of electricity meters was carried out by licensed technicians who also happened to be residents of Sidomulyo/Kricak, and who facilitated illicit electricity tapping and sharing as well. State-supported components of the built environment (e.g. electricity and water meters, public bathrooms, paved lanes, etc.) are instruments circulating in the whole neighbourhood, which become a stabilising force in the existence of this kampung in line with DeLanda’s (2006) assemblage concept.

Like informal settlements elsewhere, kampung cannot be divorced from broader political issues. While political parties often use the informals as a strategy to gain votes (Roy, 2004), in Sidomulyo/Kricak, it was the residents who asked the mayoral candidates to formally inaugurate the unauthorised community halls (by signing the plaques), although the buildings had actually been functional months before the inauguration. Residents speculate by inviting the would-be mayors to come to the kampung. These politicians might in the future become responsible to maintain urban order, including the eradication of informal settlements. But these residents were confident that, during the election season, the mood of politicians is to get as many votes as possible, which often yields a more relaxed way of imposing the law on this development issue. They are speculating that the future Mayor will not demolish the community hall he has previously inaugurated.

Support from the state for the ongoing development of Sidomulyo/Kricak, either directly or circulating through the built forms, explains how the assemblage works. As outlined in Chapter 3, assemblage is as a whole characterised by the relationships of parts (DeLanda, 2006). While the legalists may say the making of
speculative settlements: built form/tenure ambiguity in kampung development

built forms operate outside the law, the built forms that constitute this kampung emerge and survive through the symbiosis between the state and the kampung residents - two integrated parts that can be detached since each part is an independent entity. the symbiosis not only occurred between the state and the residents, but also among the socially divided residents of sidomulyo/kricak. the mutual relationship of landlords and renters, either land renters (pengindung) or normal room renters, is an example of this.

the position as land renters can be regarded as an improved state of tenure experienced by the former barrack’s dwellers, as they were homeless after the demolition of the barrack in the mid 1970s. land renters-turn-owner, such as the case of a scavenger in atas, is also a result of mutual collaboration between landlord and land renters in tenure improvement. therefore, the sequence of residents living status at atas, from barrack’s dweller → evictee → land renter → property owner, indicates the progress of tenure attainment over time, expressed through the change in quality of materials used in the buildings. similarly residents of bawah and lengkong have never experienced displacement and other threats as a result of their unauthorised land occupation and ongoing property development. based on the definition of secure tenure, residents of bawah and lengkong can be regarded as having achieved relatively secure tenure.

while legal tenure is not a prerequisite to gain secure tenure at bawah and lengkong, it is still the ultimate tenure sought by residents. however, the attainment of legal tenure by land renters at atas yields social and environmental cost. in the previous state of tenure, the landlord had the sole authority to decide the arrangement of infrastructure, while in the case where land renters change their status to owner, the power of old landlord to make decision in development is contested. as a result, it takes longer to install communal infrastructure, such as septic tanks, as the number of land renter-turn-landlord is increasing. on the one hand it might give a better land value to the owners, but on the other hand, it prevents the whole community from gaining a healthier standard of living, as they

31 by ‘independent’ i mean here that each part does not cease if detached from its association with other parts, like the symbiosis of wasp and flower in delanda’s (2006) assemblage theory example (chapter 3).
largely have to maintain their reliance on the use of river for bathing, washing, and defecating.
CHAPTER 5

TUNGKAK: A METAMORPHOSIS OF HOUSING FOR THE HOMELESS

*Kampung* Tungkak is an informal settlement that emerged from a former housing institution for the homeless and its surrounding environment dating back to the 1950s. The settlement comprises a mix of row houses and irregularly developed individual houses on a combination of Sultan, private, and state lands. These row houses came into existence after subdivision, partition, and appropriation of the vacant homeless housing units over time, while the clustered individual houses were developed through unplanned subdivision of the unsupervised vacant land around the vacant buildings. The Municipal Government of Yogyakarta granted an authorised administrative status in 1976.

The settlement is located on the bank of Codé River in the southern part of Yogyakarta (Figure 5.1), and currently is inhabited by 304 households. Approximately 70 per cent of these residents live in the ex-homeless housing units, while the rest are in the individual housing units constructed on the claimed vacant land around these units. The earthquake that struck Yogyakarta in May 2006 severely damaged the greater parts of this settlement and killed nine residents. However, in less than two years, the rehabilitation and reconstruction project that took place shortly after the earthquake rapidly changed the quality of the built environment.

This chapter aims to describe how the continuity and change of the built environment have contributed to the attainment of tenure. It consists of seven sections. The first section discusses the historical analysis of settlement development, from a homeless rehabilitation institute to an administratively authorised *kampung*. The second maps the housing tenure, followed by the morphological analysis of the built forms in the third to the sixth sections, to understand how these built forms influence the dynamic of tenure. The seventh section discusses the link of theoretical framework with the outcomes of the above analysis.
5.1. Historical analysis

5.1.1. Establishment of homeless housing institution (Early 1900s - 1948)
The settlement now called Tungkak was initially a newly developed public buildings complex intended for a community market, but it was never functional. Instead, the buildings were later appropriated for a homeless and war refugees’ accommodation. The Zending - a Christian missionary organization - was assigned by Sultan Hamengkubuwono VIII to manage this newly established institution, known as Rumah Pakeren Tungkak (Tungkak Subalterm House), which was built on the Sultan land (Fauzannafi, 2004). In the 1925 map published by the Dutch colonial government (Figure 5.2), the case study location (area 152) is labelled Bedelaarskolonie (Beggars Colony) and area 151 is Zendingshulphospitaal (Missionary Hospital). The year of map publication suggests that this facility had already operated in the first quarter of the 20th century. ‘Toengkak’, a settlement located across the river from the site of the case study (area number 157), often regarded as the source for the name of the today’s kampung Tungkak.

Figure 5.1 The geographical position of kampung Tungkak (source: traced and reworked by author from Google Earth 2010).
Figure 5.2 Location of the case study area (No. 152) in the 1925 map of Yogyakarta (Source: extracted from 1925 digital map of Yogyakarta, obtained from the Royal Tropical Institute, Amsterdam, 2009)

The compound originally consisted of 13 housing units (area 152 in Figure 5.2). The initial width of each unit was approximately 7m, and the average length was up to 27m\(^1\). Each building had a gabled construction and open interior. The wall was made of semi permanent construction (half brick and half bamboo), which seemed to follow the rules of magersari agreement with the Sultan because they

\(^1\) Based on observation and interview with the Chief of RT 18.
were situated on Sultan land (refer to Chapter 2). The buildings lined up along Sisingamangaraja Street and the deep escarpment of Codé River.

The aim of the establishment of such an institution was to provide residents with training programs, to make them more independent when they decided to move out. The program included literacy education and training in making brooms, dusters and mats. After the independence of Indonesia (1945), the staff members of the Provincial Social and Welfare Agency (*Dinas Sosial*) took over the responsibility of the training program. These people also lived within the housing units (Sukes, 1995).

![Division of the housing compound into two zones: Ciptomulyo (for trainees) and Gatitomo (for trainers)](image)

*Figure 5.3* Division of the housing compound into two zones: Ciptomulyo (for trainees) and Gatitomo (for trainers). Drawing by author.

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2 Sisingamangaraja Street and Col. Sugiyono Street are the current names of the main streets. As seen in Figure 5.2, the old name of Sisingamangaraja Street was Karangkadjen Street, and Col. Sugiyono Street was named Lowano Street.
The division between trainees and instructors was reflected in the built environment through the partition of the settlement into two zones: Ciptomulyo and Gatitomo (Figure 5.3). Ciptomulyo was a zone designated for the accommodation of trainees (the rehabilitated homeless people), while Gatitomo was an area for the instructors. Such a division was not simply functional, but also had a social impact on the everyday life. A former instructor who used to live in Gatitomo states, ‘Gatitomo was exclusively allocated for the staff [the government employees], those who know how to live and behave in society’\(^3\). This statement suggests that class segregation has occurred within this complex since the early times of its habitation.

5.1.2. De-institutionalisation and re-institutionalisation (1949 – 1961)

During the struggle for independence in 1948, the Dutch briefly retook Yogyakarta and appropriated the hospital for a military post (area 151 in Figure 5.2). This led to many instructors and trainees fleeing to the neighbouring kampung to avoid the conflict, since the Dutch had reportedly shot some instructors (Suksesi, 1995). However, the reoccupation of Yogyakarta only lasted for a few months, with the Dutch troops withdrawing from the city in June 1949 (Ricklefs, 2001). The provincial government of Yogyakarta subsequently transformed this facility back to its previous function. But the re-acquisition of this facility by the Yogyakarta authority did not immediately result in the buildings being restored back to their intended function, as there was a period when these buildings were loosely supervised. During this time a massive return of the former residents took place due to the lack of control by the Provincial Welfare Agency (Suksesi, 1995).

An informant who was a witness to the above events explained that the label ‘subaltern house’ (rumah pakeren) was enough to make commoners afraid to even visit the place. This situation seems to have given the returning residents a freedom to decide the size of the claimed space. The subdivision of the interior space, particularly by married residents, took place in the early 1950s. They liberally demarcated their claimed space with bamboo frames and mats; no specific rules were applied except that the buildings along Sisingamangaraja Street were

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\(^3\) The statement appeared in an original transcript of an interview conducted by a staff of YPR in 2004 (courtesy of YPR).
dedicated for the bachelors, while the married residents occupied the rear area. This was the beginning of the informal settlement within the shells of the institution.

In response to such disorder, the management imposed tighter control on residents’ behaviour. An obvious expression of such control in the built environment was the installation of barbed wire fences around the site of both Ciptomulyo and Gatitomo (Figure 5.4)\(^4\). However, at the same time the management also improved the training program for the residents. The new program included training for the bachelors in auto mechanics, radio repairs, bicycle assembly, and handicrafts; all of these trainings were conducted outside the compound.\(^5\) The caretaker also provided free daily meals (three times a day) as well as free healthcare (Sukesi, 1995).

**Figure 5.4** Position of barbed wire constructed in the 1950s (drawing by author, based on interview).

\(^4\) An informant could still witness the existence of the barbed wire fences upon his arrival at Tungkak in 1974. The drawing of barbed wire (Figure 5.4) was made based on oral history, as the fence does not exist anymore today. Therefore, the drawing is not precise.

\(^5\) The government provided a shuttle vehicle that drove the trainees to the venue and back.
The state responded to the increasing demand for vocational training with the establishment of two new buildings to the south, later used for ATPS\(^6\) (an academy aimed at training social workers who would be working with the homeless and other disadvantaged groups, including the physically disabled people). The ATPS buildings are located adjacent to the Gatitomo area (Figure 5.5). Unlike the spatial arrangement of the earlier dormitory buildings that left the interior space open, the ATPS buildings had been subdivided into several rooms of approximately 4m x 8m each since their inception. In addition to facilitating vocational training activities, the buildings were also used to accommodate the youths who were mobilized by Sukarno’s government to join the free West Papua mission in the early 1960s.

\[\text{Figure 5.5 Construction of ATPS buildings in 1962 (drawing by author).}\]

\(^6\) ATPS stands for Akademi Teknologi Penilik Sosial (Technical Academy of Social Advisors).
5.1.3. Early practice of property selling and residents’ authorization (1962 – 1975)

The above training program worked as expected, as the few residents who could find a good job decided to move out from the dormitory to find better places to live. Some of them settled in the nearby kampung, while others chose to join the transmigration program in 1961\(^7\). Many of those who joined the transmigration needed additional funds, thus they sold their plot within the institution to people from the outside, to raise capital. This moment marked the beginning of informal property transactions over Tungkak. The persons involved did not call the transaction a ‘selling-buying’ process; instead they treated the money as a form of reimbursement for the construction costs, that is, the refurbishment of the interior space. An informant stated that the word ‘reimbursement’ was not meant to be a true reason for the payment. It was intended to show that they were aware of their position as ‘occupiers’, who did not have any rights of ownership over the property.

State funding for the institution terminated in 1962, causing difficulties in maintaining the continuity of free daily meals and training activities (Sukesi, 1995). Despite the termination of funding, however, the state continued to transfer marginalized population to live in Tungkak, an influx of new residents resulted from the 1965 raid on PKI (*Partai Komunis Indonesia* – Communist Party of Indonesia) activists. Many of these people were transferred to the compound of Ciptomulyo (Sukesi, 1995). However, instead of prosecuting only the political activists, the military also caught the homeless, prostitutes, and criminals, who might have had nothing to do with PKI. A former employee of the Social and Welfare Agency argues that the raid was intended to show foreign guests that the dormitory was still operational. As he puts it:

> I think the raid on prostitutes was only a game. Every time the government had foreign guests the raid took place, then the captured prostitutes were disposed here like filling up [the jar]. The following days these prostitutes gradually disappeared\(^8\).

\(^7\) Transmigration was a government program aimed at balancing the country’s population by moving the people from Java, Madura, and Bali islands to other less populated parts of Indonesia. The program discontinued in 1986 (The World Bank, 1988).

\(^8\) Based on a transcript of interview conducted by YPR in 2003 (courtesy of YPR).
The arrival of the new residents at Tungkak augmented the previous number to over 500, which worsened the dormitory’s condition, especially as the caretaker was no longer receiving any subsidy from the municipal government. As a result the caretaker had to formally suspend the training and free meals programs, and encouraged residents to get themselves jobs outside the dormitory (Sukses, 1995). Moreover, the influx of newcomers with such deviant backgrounds gradually exerted influence on the existing residents. Protest from the existing residents to the government against the continuing influx of ‘bad residents’ led the government to replace the head of management. However, despite the change of management, the deterioration continued. The strategy to overcome it was to replace the discontinued vocational training with moral teaching, including a religious gathering (pengajian) intended to prevent further moral degradation. The continuing absence of state funding led the management to gradually move the residents into a similar facility in another part of Yogyakarta (Sukses, 1995). According to an informant, while the buildings at the rear area (riverside) were still occupied by the existing residents, the buildings at the front area along Sisingamangaraja Street were practically deserted by the end of the 1960s and early 1970s.

The period 1972-1975 saw gradual state authorization, which the residents of Tungkak perceived as a move towards the establishment of a ‘normal’ kampung. An informant explained that the deserted buildings were still vacant at the time of his arrival in the early 1970s. He argued that these buildings were later allocated for ‘needy’ municipal government staff members. But in order to claim it, they had to first apply for approval to the Social Welfare Agency. This informant claimed that he was one of the approved applicants, after two provincial parliament members who had arrived before him. Their moving in was then followed by the gradual influx of other residents, which led the government to give them KTP (Resident’s ID Card) to enable them vote in the 1972 general election. This marked the formal acknowledgement of the residents of former homeless housing institution as ‘normal’ citizens, even though the settlement had not yet been regarded as a ‘normal’ neighbourhood.
5.1.4. Administrative authorization: becoming a normal kampung (1976 - 1977)

In 1976, the long suspension of state funding finally led the head of the homeless housing authority to make the decision to close the institution down. In the same year, the municipal government granted administrative status to the area by annexing Ciptomulyo, Gatitomo, and ATPS to RK Karanganyar (Figure 5.6), which seemed to be part of the 1977 general election plan. This annexation turned Ciptomulyo into RT 24B and converted Gatitomo and ATPS into RT 24C. The interviews suggest that the residents regarded these events as a transformation from a homeless housing institution to a *kampung*. However, despite the annexation’s supposed intention to dissolve the name of these three areas into one Karanganyar, in reality it did not quite happen.

Fauzannafi (2004) argues that the residents of Karanganyar often called the annexed area *Karanganyar Lor* (North Karangayar) to make the distinction between their socially decent *kampung* and their deviant neighbour. This new neighbourhood was treated as a *Kampung Binaan* (Assisted *Kampung*), which put it in a ‘beneficiary’
position, while the existing Karanganyar was seen as an ‘instructor’ or ‘assistant’ (*pembina*), which was expected to set a good example in governing the environment. Perhaps this ambiguity can be seen as demonstrating both the continuing problem of class difference and a way towards the stabilisation of identity.

5.1.5. *Gali and OPK (Late 1970s - 1985)*

The 1980s saw further deterioration in the locality as a result of the continuous criminal behaviour of some residents, despite the granting of citizen’s ID cards and the authorization of the settlement. The population of burglars, pickpockets, prostitutes and the like increased sharply in the late 1970s to the extent that Tungkak was often seen as one of the most dangerous locales in the city. An informant described that the *Gali*\(^9\) (gangster) of Tungkak often stopped public transport that passed Colonel Sugiyono Street (to the north) to beg for money for their roles in finding the passengers for the bus driver\(^10\).

During the 1977 general election, political parties often recruited *Gali* for their security guards. Golkar (the party of former President Suharto) saw that their involvement in the security task force was successful, and they were keen to hire these *Gali* again for the 1982 election. They hired 15 *Gali* from Tungkak, who were grouped into a task force called *Komando Inti Keamanan* (Core Security Commando), a subset of *Satuan Tugas Khusus* (Special Task Force). This core group was responsible for safeguarding party members during the campaign, and often engaged in fighting with the security guards of other parties (Sukses, 1995).

Two events remain clear in the collective memory of most senior Tungkak residents today. The first was a massive attack by security members of PPP (*Partai Persatuan Pembangunan*), the adversary of Golkar. They claimed it as an act of revenge since they believed that some Tungkak residents had been throwing rocks during their campaign parade. PPP members arrived en masse, carrying swords,\(^9\)\(^10\)

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\(^9\) As outlined in Chapter 4, *Gali* stands for ‘Gabungan Anak Liar’ (literally translated as Association of the Deviant Kids), which simply means gangster.

\(^10\) All city buses at that time were owned and operated by private companies. These companies paid the drivers based on the money these drivers collected from the passenger daily. Therefore, getting the high number of passengers was their priority.
knives, and other sharp weapons, which caused many casualties and much damage to buildings. The military forces imposed a curfew for approximately a month to prevent further conflict.\textsuperscript{11}

One informant explains that besides recruiting Tungkak residents as their security guards, Golkar had also built a security headquarters on Sisingamangaraja Street within the Tungkak area, while the majority of people living at the existing RK Karanganyar were supporters of PPP. Thus the attack seemed to have been a challenge to Golkar control of the area.

The second memorable event was the execution of OPK (\textit{Operasi Pemberantasan Kejahatan} - Operation of Crime Eradication) in 1985. As discussed in Chapter 4, OPK was a government initiative for crime eradication and involved the controversial \textit{Petrus} – an acronym of ‘PEnembak misTeRIUS’ (mysterious sniper). During the OPK operation, occasional house investigations in search of fugitives and weapons often threatened Tungkak residents. However, while OPK was often regarded as a repressive way of eradicating crime, many residents of Yogyakarta saw it as an effective way of solving the serious problem of gang crime at the time.


Despite the amalgamation of the former homeless dormitory with RK Karanganyar often being seen as a milestone towards a normal \textit{kampung}, appropriation of these buildings did not intensify until the end of OPK in early 1986. The first attempt at house appropriation came from a former parliament member who claimed to have a letter of permit from the Mayor for legally living in the ex-dormitory building on Sisingamangaraja Street. His decision to extend the residence was soon followed by other residents who regarded him as a ‘representative of the state’, although no one in the neighbourhood has ever seen the legal document he had claimed to have. Yet his status encouraged others to follow in his footstep (Fauzannafi, 2004).

As outlined in Chapter 2, the government of Yogyakarta began to adopt the RW system in 1989. This new system replaced the previous RK system that used to

\textsuperscript{11} Based on an unpublished interview conducted in 2003 by a staff member of YPR (courtesy of YPR).
divide Tungkak into two neighbourhoods (RT 24B and RT 24C). Since the implementation of the RW system, Tungkak has been divided into 2 RWs, each of them consists of 3 RTs. In other words, the previous two RTs were subdivided into six RTs (Figure 5.7).

![Figure 5.7 Administrative division of Tungkak after the implementation of RT/RW system in 1989 (drawing by author).](image)

Meanwhile, besides appropriation of the built forms through the extension of the homeless housing units, subdivision of vacant lands around these buildings occurred as well. A primary group of actors in this land subdivision were the scavengers who were actually the longest-standing residents living in the ‘mixed’ area (Figure 5.8). They often caused conflict with the non-scavenger residents because of the smell and bulkiness of the scavenged items. The continual practice of keeping the scavenged items in the dormitory buildings had led to the non-scavenger residents sending complaints to the RT leader, who then suggested to the scavengers that they move their belongings out of the area. In response to this demand, in the 1990s a leader of the scavengers called Sumo began to dump soil on top of the informal public rubbish dumping site on the west bank of the river,

12 The site also accepted rubbish delivered daily by the municipal waste truck.
turning it into a base for a series of sheds for keeping the scavenged items (Figure 5.9). He then sold these sheds to the scavengers who gradually turned them into housing, which was sarcastically called *Sumo Indah* (Beautiful Sumo) - a term commonly attributed to a developer’s built housing and gated communities in the formal world. Many scavengers who used to live in the homeless housing units made a profit by selling their space within these units for about Rp.10,000,000 (A$ 1,250) then bought the land and shed from Sumo for about Rp. 3,000,000 (A$ 375)\(^\text{13}\). These people became known as the ‘back people’ (*wong mburi*), another sarcastic term fabricated by the more affluent residents who live in the buildings on Sisingamangaraja Street who called themselves the ‘front people’ (*wong ngarep*).

![Figure 5.8 The social zoning of Tungkak (drawing by author).](image)

These two terms were not only intended to represent the location of dwellings but more importantly, to communicate the two distinct social classes of resident. The ‘back people’ were regarded as backward in social, economic, and

\(^\text{13}\) These exchange rates are based on the current average exchange rate (A $ 1 = Rp. 8,000), which might not be the same as the average value of exchange rate at that time.
educational terms, while the ‘front people’ who were mostly government employees and intellectuals saw themselves as having a higher status. In contrast, the population of ‘back people’ were a mixture of scavengers and accused criminals who, according to an informant, used to seek refuge to avoid police prosecution. These people were mostly nomads, tending to move in and out without giving any notice to the RT committees, and they had no KTP (Resident’s ID Card). The space between the ‘front’ and the ‘back’ - which I call a ‘mixed zone’ (Figure 5.8) - consists of a mixture of both characters, although the boundary between these spaces tends to be fluid.

Figure 5.9 Sheds to keep the scavenged items at Sumo Indah (photo credit: Muklas Setiawan, 2004).

Figure 5.10 Top: The condition of the east building of the ATPS compound in 2003 (demolished in 2004). Bottom: Interior of a kitchen in an extended room as shown in the top picture (photo credit: YPR, 2004).
While *Sumo Indah* was gradually developed and appropriated, at the same time, the former ATPS buildings were internally appropriated (Figure 5.10). However, the inhabitants did not fully occupy the entire buildings until the demolition and eviction in 2004. These people were mostly the ex-residents of homeless housing units. As an informant puts it:

The people who lived there [former ATPS buildings] were the ‘old-timers’ [the homeless housing dwellers]. You know, at that time people just claimed the land if they saw it vacant. They sold the space to claim the vacant lands and ATPS buildings. They knew that ATPS did not belong to them, but they made it as if they had the right to live there.

A local newspaper, *Kedaulatan Rakyat*, reported that the number of households prior to the eviction was 15 (cited in Fauzannafi, 2004), while *Kompas*, a national newspaper, wrote that these residents were surprised that the Sultan had approved the state’s plan to build the District Government office on the ATPS site (cited in Fauzannafi, 2004), which seemed to contradict their expected role of the Sultan as a guardian of the poor.\(^{14}\) They rejected the state’s decision to provide compensation of Rp. 3,000,000 (A$ 375) per household, as what they wanted was a place to live. By contrast, the report went on to give information about the government’s claim that 14 residents had agreed to accept the compensation (Fauzannafi, 2004), despite the fact that they had disagreed with the decision. But their attempt to negotiate with the government, which involved an organized street protest (Figure 5.11), resulted in deadlock. This deadlock led an RT chief to come forward with an alternative solution. As an informant explains:

They [the government] only gave *tali asih*.\(^{15}\) Because there was a vacant property available and no one managed it, so an RT chief proposed to use such vacant property to accommodate the evictees. It was just to ease the hard negotiation with the government, because on the one hand they [the government] refused to relocate these people, and only gave [insufficient] compensation. On the other hand we did not know where they were going to move. Even this solution was once rejected [by the evictees].

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\(^{14}\) This expectation is commonly found in the case of land invasion over the Sultan lands (see for example Setiawan, 1998).

\(^{15}\) *Tali asih* is originally a Javanese term, often understood as a form of donation rather than compensation. The words “only gave *tali asih*” indicate that the money was not sufficient to support the relocation.
The vacant property was actually a derelict community fishpond, adjacent to the gully (Figures 5.12 and 5.13). While the evictees rejected the proposal, the households who lived nearby the pond did not welcome these evictees either. Only after exhausting negotiations (facilitated by an RT leader) did both parties agree to accept the proposal, which led these evictees to build their new houses.

Figure 5.11 An organized protest against the plan of forcible eviction of ATPS residents in 2004, being held in front of the (now demolished) ATPS building16 (photo credit: YPR, 2004).

Figure 5.12 Relocation site for former ATPS residents (drawing by author).

16 One of the banners (to the right) says, ‘KAMI BUKAN ANTI PEMBANGUNAN TETAPI ANTI PENGUSURAN’ (WE ARE NOT ANTI DEVELOPMENT BUT ANTI EVICTION).
5.1.7. Consolidation, earthquake, and reconstruction (2005 – 2008)

An influential community leader argues that the notion of ‘back people’ and ‘front people’ is no longer relevant today. He claims that he (and another informant) played a major role in bridging the gap between these contested community groups. The ‘former’ back people have recently been involved in various neighbourhood activities that reflected fast progress towards social inclusion.

This informant was an RT chief who paid a close attention to the maintenance of order in his neighbourhood. One of his serious concerns was to ensure that every adult resident had a KTP, because KTP reflects the legitimacy of one’s identity as resident of a legitimate neighbourhood. This was rather problematic in a place like Sumo Indah, as the residents, particularly the short period ones, tended to hide their identity in order to avoid detection by the authorities. My informant’s concern about a citizen’s legitimacy was based on his experience of handling aid distribution for the victims of fire over the back people’s area some years ago. He found the task was difficult and challenging because many victims did not have any KTP, while the aid agencies often demanded a clear ID to show that the money was distributed to the intended beneficiaries. In addition, the deteriorated living conditions at Sumo Indah also influenced the perception of Tungkak by neighbouring people. Tungkak was often seen as one of the most squalid kampung in the city. Prokasih (Program Kali Bersih – Clean River Program) - a municipal government initiative to clean the rivers, was set up by the municipal government to
regularly maintain the cleanliness of the rivers in Yogyakarta, through community participation. However, my informant argues that this program was a piece of empty rhetoric. The public too perceived the implementation of that program as simply ceremonial, since the cleansing activity usually only took place in honour of the once-a-year Independence Day celebration on 17 August, where the ‘ritual’ of neighbourhood cleaning appears across the country.

The deteriorating condition of the eastern bank had attracted a number of visitors from the universities and research agencies. Students and academics occasionally conducted surveys on the environmental quality of the settlement. My informant preferred to organize meetings with these people on the riverbank rather than in the community hall, involving also some Sumo Indah residents. As he puts it:

The reason why we held the meetings over there [the riverbank] was that we wanted the people there to be equal to the people here, to eliminate the distinction between the ‘front people’ and the ‘back people’.

The strategy for making Tungkak socially inclusive, according to the above informant, was the establishment of Forum Komunikasi Code Selatan (South Codé Communication Forum), aimed at sharing information to improve people’s awareness of healthy living. A further strategy was to improve the physical environment, which they implemented through the upgrading of a street along the eastern riverbank. However, the street-upgrading plan did not get a total support from the residents. My informants\(^\text{17}\) received a murder threat by some of the Sumo Indah residents who were afraid that they might lose their land if the street construction project really took place. Nevertheless, the plan continued and was approved by the Ministry of Regional Infrastructure who granted Rp. 138 million (A $ 17,250) for the street pavement project in 2005, to upgrade a street that had been operating for more than a decade.

The disappointed Sumo Indah residents accused my informants of using the money for an inappropriate end. ‘Many people are hungry, why are you going to spend 138 million just for a street? I suspect the committee have swallowed it!’ mentions one of my informants, repeating what a resident had said at the time.

\(^{17}\) These informants were two community leaders who often worked together in various neighbourhood development initiatives.
However, as seen in Figure 5.14, the plan did not halt. My informants even managed to get more funds, Rp.10 million (A $ 1,250) for a small-scale microfinance program that enabled participants to secure loans for the setting up of small businesses, although this program did not go well as the number of non-performing loans was high.

Figure 5.14 A paved street on the eastern boundary of Tungkak (lining the west bank of Codé River (photo credit: Muklas Setiawan, 2008).

The pavement layout had not yet been completed when an earthquake hit the province of Yogyakarta on 27 May 2006, with a magnitude of 5.9 on the Richter scale. Besides destroying houses and public buildings, the quake killed over 6,000 people in Central Java, of whom 4,715 were from the Province of Yogyakarta (Kompas, 1 July 2006 - cited in Raharjo, 2007:170). Nine residents of Tungkak were killed in the disaster, and the destructive impact on the settlement was severe, including the destruction of the mosque and community hall (Figure 5.15). While the effect on housing ranged from minor damage to homes being totally destroyed (Figure 5.16 Left), the scavengers housing (largely built on the top of a rubbish dump) fell into the latter category, leaving all the residents homeless. It was not clear whether the killed residents were all came from the scavengers housing, but the vulnerable soil structure of the reclaimed rubbish dump presumably contributed to such level of destruction.

An informant explains that the previously troubled neighbourhood spontaneously formed a task force (committee) shortly after the end of the quake (Figure 5.16 Right). Their initial task was to find out the number of casualties and the
extent of damage to the buildings, and sent the data to many organisations to get aid. This effort led the residents to receive funding for the reconstruction of the destroyed buildings, in addition to food and medicine.

Figure 5.15 Map of damage level after 2006 earthquake (drawing by author)

The aftermath of the 2006 earthquake (photo credit: Muklas Setiawan, 2006).

A meeting to conduct participatory design for house reconstruction. Photo credit: Muklas Setiawan, 2006.

Figure 5.16 The post earthquake.
The reconstruction of destroyed building, however, could not be executed immediately, as the mobilisation of funds and the complexity of the problem on the ground could not be quickly tackled. The financially crippled provincial government had to rely on the assistance of many organizations, including international donors. Meanwhile thousands of victims, particularly the low-income families, including many Tungkak residents, had to live under the ruins and in tents, while waiting for the complicated decisions to be made regarding rehabilitation and reconstruction assistance.

The earthquake also halted the ongoing street pavement construction described above. My informant explains that the committee members faced a dilemma with the money they had received, as they had already signed the contract for the street pavement project, while they found many public buildings had collapsed, including the community hall - the place where people seek alternative refuge in times of crisis. Later they decided to negotiate with the Kimpraswil (Provincial Agency of Settlements and Infrastructures) and the selected contractor to amend the contract. Kimpraswil and the Emergency Responses Committee then agreed to amend the contract, to allow the task force to reconstruct the collapsed community hall. However, the construction could not be carried out immediately, as there was resistance coming from a number of Sumo Indah residents who previously stood against the street construction project, and who now demanded money be distributed to all the residents. As my informant explains:

I argued against these people, ‘I have proposed [to the government] to use the money for the reconstruction of our community hall. If you disagree, please tell me when will we rebuild it?’ I challenged them if they could collect the money within 3 months then I would return the grant to Kimpraswil. However, within 3 months no one did it, so I continued the plan of rebuilding the community hall.

The reconstruction of the community hall was completed before the end of 2006. One of the first important events that took place in the hall was the Community Action Planning (CAP) to formulate the implementation strategy of the GTZ-funded18 rehabilitation and reconstruction program. The CAP produced a map

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18 GTZ (Gesellschaft für Technische Zusammenarbeit) is a German cooperation enterprise.
that showed both the problems the residents were facing and their imagined neighbourhood after the rehabilitation and reconstruction (Figure 5.17). An informant argues that during the CAP process, all problems identified and solutions proposed were recorded on the map regardless of their relevance, as they reflected residents’ concerns and understanding of the built environment in their neighbourhood. The map was signed by all participants of CAP as a way of agreeing with the plan.

![Figure 5.17 A map produced by the community through CAP (Community Action Planning) showing both the problems and the imagined solutions (photo credit: Muklas Setiawan, 2007).](image)

Therefore, the map is useful to understand not only how the residents perceive the built environment and social conditions of kampung, but also how they redefine the future of their neighbourhood, which is an important source for the morphological mapping tasks. To better read the photograph of the map (Figure 5.17), Figure 5.18 traces the problem identified on the map, while Figure 5.19 traces the proposed solution.
Figure 5.18 Community’s identification of the locus of existing social problems (traced by author from Figure 5.17, map not to scale).

Legends for Figure 5.18 (problem identification)

<table>
<thead>
<tr>
<th>Legends</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR</td>
<td>Place on the riverbank where people defecating</td>
</tr>
<tr>
<td>CD</td>
<td>Place of community disease – the locals often called it Pekat, an acronym of penyakit masyarakat (community disease), which includes gambling, stealing, harassing, and drinking on public places.</td>
</tr>
<tr>
<td>CL</td>
<td>Lack of attention to cleanliness</td>
</tr>
<tr>
<td>LT</td>
<td>Need more (public) toilets</td>
</tr>
<tr>
<td>LH</td>
<td>Lack of attention to health issues</td>
</tr>
<tr>
<td>LG</td>
<td>Lack of greenery</td>
</tr>
<tr>
<td>HD</td>
<td>High density living</td>
</tr>
<tr>
<td>LR</td>
<td>Lack of interest in reading</td>
</tr>
<tr>
<td>YB</td>
<td>Youth with bad behaviour</td>
</tr>
<tr>
<td>SP</td>
<td>Sewerage problem</td>
</tr>
<tr>
<td>DO</td>
<td>High number of school drop outs</td>
</tr>
<tr>
<td>AC</td>
<td>Lack of attention to aged care</td>
</tr>
<tr>
<td>LS</td>
<td>Land status problem</td>
</tr>
</tbody>
</table>
Figure 5.19 Proposed solutions (traced by author from Figure 5.17, map not to scale).

Legends for Figure 5.19 (proposed solutions)

<table>
<thead>
<tr>
<th>Legends</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH</td>
<td>Plant trees to create shady pedestrian area</td>
</tr>
<tr>
<td>GR</td>
<td>Greenery along the riverbank</td>
</tr>
<tr>
<td>CJ</td>
<td>Create jobs</td>
</tr>
<tr>
<td>AD</td>
<td>Approach the people who were involved in the activities of Pekat (refer to the legends of Figure 5.15)</td>
</tr>
<tr>
<td>VW</td>
<td>Voluntary cleaning of the environment</td>
</tr>
<tr>
<td>IC</td>
<td>Irrigation channel cleansing – once a month</td>
</tr>
<tr>
<td>FP</td>
<td>Installation of fire protection apparatus</td>
</tr>
<tr>
<td>TM</td>
<td>Improvement of public toilet management</td>
</tr>
<tr>
<td>TR</td>
<td>Public toilet repair</td>
</tr>
<tr>
<td>DR</td>
<td>Drainage repair</td>
</tr>
<tr>
<td>BV</td>
<td>Awareness of private housing that violates public interests</td>
</tr>
<tr>
<td>GC</td>
<td>Garbage collection once every two days</td>
</tr>
<tr>
<td>NT</td>
<td>Need for additional public toilets</td>
</tr>
<tr>
<td>YS</td>
<td>Improve youth and senior relationships</td>
</tr>
<tr>
<td>LC</td>
<td>Secure land for cemetery</td>
</tr>
<tr>
<td>GB</td>
<td>Needs additional garbage container</td>
</tr>
</tbody>
</table>

All the problems identified above suggest that residents’ concerns are predominantly inclined towards environmental and health issues (see legend for Figure 5.18). Nevertheless, the area labelled ‘LS’ (Figure 5.18) was identified as having land status problem. While the occurrence of LS is not dominant, it shows that the seed of anxiety on tenure insecurity is still apparent. Furthermore, the area
labelled ‘LC’ in Figure 5.19 shows an idea of utilising a vacant land on the riverbank for cemetery. The need of spaces for the dead remains a problem in this kampung, as burial ground cannot be obtained through encroachment. As found in Sidomulyo/Kricak (Section 4.5), residents of Tungkak have no choice but to go to a public (formal) cemetery when it comes to dealing with the dead.

5.2. Tenure mapping
Tenure mapping is aimed at understanding the way in which tenure attainment operates in this settlement. There were 304 households at Tungkak mapped at the time of survey in February 2008 (Table 5.1), the majority (more than 60 per cent) of these people lived in the ex-homeless housing units while the rest inhabited the individual houses either on authorised land or on individually claimed Sultan and state lands around these units. What makes the tenure situation in this settlement more complex is the co-existence of Sultan land. The fact that this type of land dominates the whole of Tungkak has made the property tenure in this kampung highly ambiguous.

As outlined in Chapter 2, the Sultan lands have no title, and are exclusively managed by institution of the monarchy. One who wishes to construct a building on top of this land needs to have a special agreement with the Sultanate administration (kekancingan). Since the lands have no link to the state tenure system, they cannot be authorised by the state nor can they be sold. Nevertheless, the construction of buildings on top of Sultan land has to go through the state authorization, as the state holds the right to control the building codes and city master plan.

<table>
<thead>
<tr>
<th>RW</th>
<th>RT</th>
<th>Number of household</th>
<th>Number of population</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>64</td>
<td>52</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>37</td>
<td>110</td>
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<tr>
<td></td>
<td>66</td>
<td>63</td>
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</tr>
<tr>
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<tr>
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<td>68</td>
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</tr>
<tr>
<td></td>
<td>69</td>
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<td>274</td>
</tr>
<tr>
<td></td>
<td>304</td>
<td>1025</td>
<td></td>
</tr>
</tbody>
</table>
Table 5.2 Tenure types in Tungkak (recorded by author in September 2008).

<table>
<thead>
<tr>
<th>LAND</th>
<th>OWN</th>
<th>RENT</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OWN</td>
<td>OWN</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>RENT</td>
<td>OWN</td>
<td>RENT</td>
<td>N/A</td>
</tr>
<tr>
<td>USE</td>
<td>OWN</td>
<td>RENT</td>
<td>USE</td>
</tr>
</tbody>
</table>

Figure 5.20 Map of tenure of residential buildings recorded in September 2008 (refer to Table 5.2 for tenure category and Figure 5.20 for Section A-A) (Drawing by author).
Using the colour coding interpolated in tenure structure (Table 5.2), Figure 5.20 shows the distribution of tenure conditions over Tungkak, which comprises six types based on resident’s relationship with the house\(^{19}\). The first of these is the Use/Use category marked in black, representing the use of government buildings on Sultan land. Figure 5.21 shows an indicative way, how these former homeless housing units are generally subdivided internally into small apartments. Detailed mapping of the private spaces was not undertaken for this study. Tenure structure of this type is ambiguous because the residents do not have any formal agreement with the government nor the Sultan for using either house or land. However, regardless of such ambiguity, property transaction either through selling or leasing is very common. The second type, Rent/Use (marked in pink) occurs if unit/land packages are rented out. The selling of these row houses (ex-homeless housing units) is usually made through informal transaction. According to an informant, parties involved in such transaction would not call the money received by the former residents as ‘selling cost’. Instead they would call it ‘reimbursement of the construction cost’, as they assume the previous residents have spent some monies for the upgrading and modifications. This reflects a self-understanding of the fact that they actually have no right to sell, because they do not own the property\(^{20}\). The Rent/Use structure also exists within the self-built individual houses, both on the Sultan land and on the state land.

The third type of tenure structure is labelled Own/Use, marked in red, which is unauthorised housing built on Sultan and state lands, including *Sumo Indah* housing (Figure 5.9). These lands were subdivided and claimed based on a ‘first-come-first-get’ attitude (*rayahan*), potentially as scavengers were largely displaced from the former homeless housing units after 1976.

Both Use/Use and Own/Use categories on the Sultan land can be regarded as ‘unauthorised *magersari*’, because they occurred without authorisation from the Sultan. Residents of the ex-homeless housing have not been able to negotiate with the Sultanate office to formally get the *magersari* land status. A committee was

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\(^{19}\) Resident is a person (usually the head of the family) who has the agreement with the property owner or holds the rights of property granted from the state.

\(^{20}\) This notion seems to continue the tradition of property selling that has emerged since the 1960s (see Section 5.1.3).
formed in 2000 to carry out such a task, but was unsuccessful (Fauzannafi, 2004). Yet, regardless of the abandonment, the buildings still officially belong to the Provincial Government of Yogyakarta albeit on Sultan land. Figure 5.22 shows an indicative section how the Own/Use tenure spans across both Sultan and state land as it approaches the river.

Figure 5.21 Schematic drawing of typical changes of the interior space in the ex-homeless housing units. Top: open interior before the gradual subdivision in the 1970s. Bottom: interior subdivision by means of semi permanent partition walls in 1970s until the present day (drawing by author based on observation and interview).
The fourth type of tenure is labelled Own/Own, marked in green, located mostly on the northern boundary of Tungkak along Colonel Sugiyono Street. This is the most secure type of tenure, as the residents have the Right of Ownership from the state. If the house/land packages of this type are rented out (Rent/Rent), they are marked in light green. Residents of both tenure categories (Own/Own and Rent/Rent) are mostly employees of the Health Centre located on Colonel Sugiyono Street\textsuperscript{21} and formal traders.

The final type of tenure structure is self-built house on a rented land (Own/Rent) - marked in dark green, which is similar to the \textit{ngindung} land leasing system. However, unlike the \textit{ngindung} practice found in Sidomulyo/Kricak (Chapter 4), the land leasing practice here is unauthorised. It applies only to one building where land is paid to a claimant rather than the owner of the land\textsuperscript{22}.

The actual number of households living in the combined ex-homeless housing (Use/Use – in black colour) and self-built houses on Sultan land (Own/Use – in red colour) is 248 or about 81 percent of the total number of households. Such a dominance of quasi-ownership on Sultan land can be read as a continuing prospect of secure investment on these lands, as the practice of property transaction has been occurring with increased intensity since the authorisation of Tungkak in 1976. State tolerance of this tenure ambiguity seems to relate to the fact that all the Sultan lands have supposedly been managed exclusively by the monarch’s administration. No property transaction on either Sultan or state controlled lands in Tungkak has ever been recorded thus far; not even in the form of informal documents signed before the RW committee (as found in Sidomulyo/Kricak - Chapter 4). Nevertheless,

\begin{figure}
\centering
\includegraphics[width=\textwidth]{diagram}
\caption{Section A-A: Schematic drawing of tenure structure (drawing by author).}
\end{figure}

\textsuperscript{21} Formerly Zendingshulhospital.
\textsuperscript{22} The land belongs to the state.
all the residents of Tungkak, particularly those who lived in the ex-homeless housing units, regularly paid an annual Land and Building Tax (PBB - *Pajak Bumi dan Bangunan*). Interview and hard evidences suggest that the money is collected and recorded by each RT chief.

In sum, despite the highly ambiguous tenure, the practice of property speculation continues. Residents are conscious yet anxious about their uncertain position, but the formal system that circulates within the kampung, such as RT/RW status, KTP (Resident’s ID Card), and land and building tax (PBB) payments suggest that these residents’ existence in the *kampung* is formally acknowledged by the state. While the CAP map outlined earlier suggests a certain extent of residents’ anxiety in tenure insecurity (see legends for Figure 5.18), the above formalisation reflects residents’ attainment of *de facto* secure tenure.

5.3. Morphological analysis
This section looks at the hard space of the built environment. Elements of hard space mapped include building functions, built landscape components (gates, streets, and open spaces) and construction materials.

5.3.1. Building Functions
The development of *kampung* Tungkak cannot be divorced from the abandonment of the homeless housing. Referring to Zeisel (2006) on tracing the changes of the built environment (Chapter 3), the hard space of early Tungkak is identified by looking at traces of spatial change as a result of built form production over time. I have argued in the previous chapter that public buildings built by the community reflect a sense of collectiveness, which suggests a greater stability of place identity. Non-residential community-initiated buildings in Tungkak include gathering halls, public bathrooms, and commercial mix-use buildings. Figures 5.23 to 5.25 show traces of changes in Tungkak, since its early stage until the time of my fieldwork (2008).

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23 One of the RT chiefs provided a hardcopy of the record during the interview.
Figure 5.23 shows the condition of Tungkak few years before the administrative authorization in the 1970s, the time when Tungkak was first perceived as a normal kampung. At the time Tungkak was partially inhabited, but all the buildings along Sisingamangaraja Street were vacant. Residential occupation was thus the only function in this settlement, while the barbed wire still existed, leaving only one main access to this settlement, from Colonel Sugiyono Street. The existence of barbed wire also suggests the government position as a sole agent who has the power to control the settlement.

Figure 5.23 Building functions in the pre-authorization period - before 1976 (drawing by author).
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Figure 5.24 Building functions in 2003, before the demolition of ex-ATPS buildings (drawing by author).

Today, more than 25 years after the authorization of Tungkak as a normal *kampung*, the production of built form in this settlement continues. It can be inferred, by comparing Figure 5.24 and 5.25, that the previously residential-only buildings have now a multiplicity of functions, ranging from private-commercial activities to a variety of public usages, including government offices and a state primary school.

There are three gathering halls in Tungkak: two community halls, and a mosque. As depicted in Figure 5.24, the RW 19 hall was the only community hall in Tungkak before 2004. However, the demolition of the ATPS buildings in 2004 gave
the community of RW 18 an opportunity to negotiate with the state, to allow them to reuse the demolished building materials for the construction of another community hall in the southern part of Tungkak (Figure 5.25). This was a form of compensation they demanded from the state. As an informant describes:

The RW hall was actually initiated not through direct government assistance. The government left the timber from the demolished ATPS buildings for us to sell. So we got only the timber, we got some millions Rupiah [from the selling]. I think it was 17 or 19 million Rupiah, which was enough to finance the construction. So yes, they gave the ruin of one dormitory for us, but not direct funding.

Figure 5.25 Building functions in 2008 (drawing by author).
The rebuilding of RW 19 hall after the earthquake was also a result of the community’s collective decision to alter the allocation of a government grant, from funding the street-paving project to funding the reconstruction of the severely destroyed community hall.

Commercial functions mainly occur along Sisingamangaraja Street, as a result of conversion of the ordinary houses into shop-houses. Their range of business includes a street café, computer shop, convenience store, and printing house (Figure 5.26 Left). These businesses are largely formal, yet these houses co-exist in the same neighbourhood with the Sub-district and District government offices (Figure 5.27). Besides commercial function, educational function also occurs in Tungkak: a public primary school located between the row houses and the individual houses (see map in Figure 5.25). This school has been operating for more than a decade, and shares the public open space with the row houses in front of it (Figure 5.26 Right). The school also caters to the children of Tungkak.

In summary, the number of public buildings co-exists with residential in kampung Tungkak is significant enough to lead to the conclusion that the residents of Tungkak are confident to live in a kampung with such a highly ambiguous tenure. These public buildings are not only community-constructed buildings, but also institutional buildings ranging from school to district government office. The latter co-exist with the informal community halls and other community self-built public facilities largely without demarcation.
5.3.2. *Built landscape components*

The present characters of built landscape components cannot be divorced from the genesis of this settlement as a homeless care institution. Therefore, before looking at the present condition, I want to present some analysis on the continuity and change of the built landscape components, which comprises gateway, street, and open space.
To begin with, the early Tungkak (Figure 5.28) shows that the former Tresnowati Lane\textsuperscript{24} was the only gateway to get into the area of the dormitory compound, as the buildings were surrounded by the barbed wire installed in early 1950s. This condition was maintained until the closing of these buildings as a dormitory facility in 1976. The lane - width 4 metres - was mainly used for the daily vehicle traffic delivering the government-subsidized food to the homeless housing residents, and to pick up these residents to attend the mandatory vocational training held in other parts of the city.

![Map of Tungkak](image)

\textbf{Figure 5.29} Major building functions in 2004 (drawing by author).

Gradual development of Tungkak until shortly before the demolition of ATPS building resulted in changes in spatial structure as depicted in Figure 5.29, which

\textsuperscript{24} The lane was named 'Tresnowati' because the land belonged to Tresnowati Hospital (formerly \textit{Zendingshulhospitaal}, now Community Health Centre) adjacent to it.
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show that former Tresnowati Lane were no longer functioning. The management of Community Health Centre (Puskesmas) blocked Tresnowati Lane since 2000 (Figure 5.30) and claimed it as their private property, which resulted in the closing of access to Colonel Sugiyono Street.

![Figure 5.30](image.png)

**Figure 5.30** Former Tresnowati Lane, now closed by the Health Centre management (photo credit: author, 2008).

![Figure 5.31](image.png)

**Figure 5.31** Major building functions in 2008 (drawing by author).
Figure 5.32 Typical extension of the ex-homeless housing units (photo credit: author, 2008).

Figure 5.33 Initial lane width before the extension of the ex-homeless housing units (drawing by author based on interview).

Figure 5.34 Average lane width after incremental extension of the ex-homeless housing units recorded in January 2008 (drawing by author).
Lanes in the interior area of Tungkak, particularly between the ex-homeless housing units have gradually undergone major changes as a result of building extension. Figure 5.31 shows the accumulation of house extensions, indicating that the lanes between the buildings have been filled up with extended rooms. Such extensions have contributed to the formation of new spatial structures (Figure 5.32). An analysis of extension over time (Figures 5.33 and 5.34) shows a significant reduction of the width of the lane from 12 m to 1.5 m.

![Figure 5.35 Entry lanes, open spaces, and the locations of ‘community disease’ – PEKAT (drawing by author based on CAP map – Figure 5.18).](image)

The streets and lanes developed as a result of ex-homeless housing extension and construction of new houses around them, which over time have allowed access to places previously hidden and to areas further south (Figure 5.35). These accesses
are now open to traffic from the main streets: Sisingamangaraja Street to the west and Colonel Sugiyono Street to the north\textsuperscript{25}. Figure 5.35 shows that the existence of several entry lanes on Sisingamangaraja and Col. Sugiyono Streets), and appropriation of access that allows traffic to flow across Tungkak can be read as an expression of the residents’ growing self-confidence in revealing their secure identity. A place like Sumo Indah, previously invisible from general public gaze (Figure 5.36 Left), can now be easily accessed and visible (Figure 5.36 Right).

Figure 5.35 also reveals accesses to places whereby social problems have often occurred. One example of these problems is what the locals termed PEKAT\textsuperscript{26} (an abbreviation of PEnyakit MasyaraKAT – Community Disease), which include activities such as gambling, harassing, stealing, and drinking in public places. The acknowledgement of PEKAT in the map could be read to mean that the residents of Tungkak do not see PEKAT as a threat to tenure attainment. Instead, it is regarded as a normal everyday problem found in any kampung.

\textit{A series of garbage sheds on Sumo Indah before the construction of eastern lane (photo credit: YPR, 2004)\textbf{Figure 5.36 Eastern lane upgrading.}}

\textsuperscript{25} The residents have described such a sense of openness on the map they created during the reconstruction project (Figure 5.17).

\textsuperscript{26} PEKAT is an abbreviation that has been officially introduced by the state in recent years.
Speculative Settlements: Built Form/Tenure Ambiguity in Kampung Development

An entry gate (gapura) on the north side of Tungkak

A notice on the gate door, prohibiting public to enter the neighbourhood after 23.00

**Figure 5.37** Entry gate of the eastern lane (photo credit: author, 2008).

As outlined in the previous chapters, entry gate (gapura) and security post (gardu) are two built forms typically signifying the entry and boundary of a settlement. In most cases of informal settlements in Indonesia, including Tungkak, both gates and security posts are established after the residents have become a solid community. Figure 5.37 (Left) shows an example of a gate with a door installed after help was obtained from a group of university students conducting social works at Tungkak in 2003, combined with aid from the government. This door usually closed at 23.00 by the community’s night patrol group, which is shown on the sign (Figure 5.37 Right) that says ‘Pukul 23.00 Pintu Tertutup Untuk Umum’ (At 23.00, Door Closed to Public). This does not mean a total prohibition to entering the settlement after 23.00. Instead, a stricter traffic control would be applied after 23.00. A night patrol group usually ask the incoming person to present a valid ID card, if he or she is a non-resident or stranger to the community. This collective capacity to maintain the control over a territory can be seen as part of the progress to tenure stabilisation.

With regard to the gate, its role in aiding the sharpening of the territorial boundary has been discussed previously. While the gate is a built form that does not

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27 Based on an interview of an unpublished survey by Rentaningdyah, 2004 (courtesy of YPR).
function as a place of human activity, it conveys the identity of a settlement. Figure 5.37 (Left) is an example of how such a function works: a gate that marks the existence of a new paved lane that welcomes the public to the interior space of Tungkak. The gate also reveals the ambiguity in naming the *kampung*, with the sign that says ‘Karanganyar RT 69 RW 19’. ‘Karanganyar’ was a formal name of this neighbourhood when the RT/RK system was still in effect. But today, with the RT/RW system operated throughout Indonesia, the name becomes informal. Strangely the term ‘Tungkak’ - which only exists in verbal communication - is more popular. Moreover, the words ‘RT 69 RW 19’ within the sign imply a strong segregation affected by the neighbourhood administrative boundary, as these words only represent one RT, while there are six RTs within the two RWs in the whole Tungkak.

5.3.3. Building materials

As outlined in previous chapters, permanence of building materials might suggest tenure dynamics. In the local construction practice these materials have been grouped into three categories, that is, permanent (brick and concrete), semi permanent (half brick – half bamboo), and temporary (bamboo or timber). Building materials used in the construction of built forms in Tungkak now fall mainly within the permanent category.

The dominance of the permanent category (Figure 5.38) has been a result of the continuous appropriation of the dominant ex-homeless housing units, which initially fell within the semi-permanent category. Among the 266 buildings surveyed, only seven of them fall within ‘temporary’ category, six are ‘semi-permanent’, while the rest are ‘permanent’. Despite the 2006 earthquake that struck the city, the heaviest impact of the earthquake (totally destroyed) on housing occurred in the *Sumo Indah* area (the scavengers’ garbage sheds and houses), which was mostly made of semi permanent materials. Temporary building materials were used in the reconstruction of these buildings (Figure 5.39 Left), which remained unchanged at the time of the survey (Figure 5.39 Right). Such reconstruction involved many actors, funded by an international donor and managed by a local NGO in partnership with the municipal government and the residents of Tungkak, as depicted in the banner (Figure 5.40).
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**Figure 5.38** Level of permanence of the building materials, mapped in January 2008 (drawing by author).

Before: reconstruction of scavengers housing (photo credit: Muklas Setiawan, 2007);

After: scavengers housing at the time of survey (photo credit: author, 2008)

**Figure 5.39** Reconstruction of scavengers housing in post 2006 earthquake.
In sum, a high sense of permanence in this kampung was already achieved since the beginning of its establishment, as the existing homeless housing units were already made of semi permanent materials. Residents who claimed and subdivided the interior space did not have to invest in the construction of the primary building structure. I would argue that while in some unauthorised areas of scavenger housing the use of temporary building materials continues after the reconstruction project, it does not mean that property investment in these areas is risky these days. In fact, comparison between tenure mapping (Figure 5.20) and building materials usage (Figure 5.38) reveals that the majority of unauthorised individual houses on state lands (Own/Use tenure category) are made of permanent building materials. It suggests the increasing confidence of residents in living and investing in Tungkak.

![Figure 5.40 A banner showing the ongoing CAP program supported by GTZ, Provincial Government, and Yayasan Pondok Rakyat (an NGO). Photo credit: Muklas Setiawan, 2007.](image)

5.4. Utilities and services

Appropriations of utilities and services can lead to the attainment of a de facto security of tenure (Payne, 1997). In Tungkak, such appropriations occur in the form of intervention from the state and NGOs in the form of infrastructure upgrading that include electricity connection, water and sanitation, and street pavement.

5.4.1. Electricity connection

Mapping of the electricity supply (Figure 5.40) was based only on the existence of an electricity meter installed on the front wall of the house. A detailed sample of the
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shared electricity network is not presented in this analysis due to the unavailability of informants capable of giving the sort of clear information on this matter, as was obtained in Sidomulyo/Kricak. However, interpolation of the available data on the morphological map (Figure 5.41) shows that more than 90 per cent of houses have a formal electricity connection, while shared electricity occurs on the eastern side, particularly within the Sumo Indah area.

Figure 5.41 Electricity network (mapped in January 2008) (Drawing by author).

As outlined in the previous chapter, shared electricity involves the role of two actors: ‘supplier’ and ‘recipient’. The former is the formal owner of an electricity
meter who supplies electricity power to the recipient on the basis of informal mutual agreement to share the bills. However, since the supplier is the formal subscriber\(^{28}\) of the electricity connection, I would argue that the supplier has a higher level of authority over the electricity network than the recipient, because the supplier has the privilege to decide whether the electricity shall be shared or not, while beneficiary’s position is subordinate. Although this issue has no direct link with individual property tenure, it could influence the day-to-day resident’s activities, particularly the recipient. For example, if a supplier decides to discontinue the electricity connection due to certain reasons (moving out, dispute, and so on). The dominance of formal electricity in Tungkak also shows no relationships between electricity network and formal/informal tenure, as formal electricity connection occurs in any tenure structure.

5.4.2. Water and sanitation

Most of the houses along Sisingamangaraja Street get their water supply from PDAM (Perusahaan Daerah Air Minum - Municipal Drinking Water Corporation), while most houses in the ‘mixed’ and ‘back people’ area have to rely on either private or public wells. The class division between ‘front people’ and ‘back people’ does indeed still exist, the difference being obvious in the appearance and quality of built forms. This fact contradicts to my informant’s claim discussed earlier that the distinction of these social groups no longer exists. The existence of formal water supply within the ex-homeless housing units (Figure 5.42) shows that state water supply can actually occur in housing with ambiguous tenure.

Public bathrooms and toilets are other built forms that could signify the progress of collective effort to gain de facto tenure. An informant explains that when Tungkak was a homeless housing compound until the early period of its administrative authorization, there was only one public well and one public bathroom available. People had to queue to get a bucket of clean water for cooking. Bathing, washing, and defecating in the Codé River along the eastern boundary were a common part of everyday life. In recent years, residents of Tungkak have gradually

\(^{28}\) This means the supplier’s name is recorded in the state electricity network.
built public bathrooms, including those constructed through the GTZ reconstruction project scheme. However, most affluent residents, particularly those who live along Sisingamangaraja Street, have their own private bathroom and toilet in the house.

Figure 5.42 Water network (mapped in January 2008)\textsuperscript{29} (Drawing by author).

5.4.3. Street paving

Paving of streets and open spaces reflects collective appropriation that heightens a sense of permanence for the whole settlement. The most obvious example of this is the new paved lane across the eastern boundary of Tungkak, lining Codé River.

\textsuperscript{29} Non-state water supply includes private well and public bathroom.
(Figure 5.36 Right). As I have outlined earlier, this new street allows the public to explore the formerly hidden interior of Tungkak (including the invisible scavengers’ housing), reflecting a greater confidence from the Tungkak residents in revealing the progress toward tenure stabilisation. State financial support to the construction of this new street represents residents’ attainment of *de facto* secure tenure.

### 5.5. Everyday life

This sub-section looks at residents’ everyday activities, which show the way in which residents maintain their role as agents who routinely control the territory. Figure 5.43 shows the venue where these activities usually took place.

One activity observed is night patrolling (*ronda*). Night patrolling at Tungkak begins at around 23.00. In the area where the gate is equipped with a door, such as the gate on the eastern lane, the person in charge of patrolling will normally close the door and hang out at the nearby security post (Figure 5.44), while other members of the night patrolling team will stroll around the neighbourhood to collect security money placed in a box (*jimpitan*). The amount of money paid daily by each household is Rp. 250 (A\$ 0.030), which makes the average minimum monthly security payment from each household equal to Rp. 7,500 (A \$ 0.90). This is one of the several bills each household has to pay as a consequence of being in Tungkak. Other bills they have to pay for are related to neighbourhood maintenance, as depicted in Table 5.3.

#### Table 5.3 Household’s routine financial contribution for neighbourhood maintenance

<table>
<thead>
<tr>
<th>No.</th>
<th>Purpose of payment</th>
<th>Amount (Rp.)</th>
<th>Conversion to A$</th>
<th>Period of payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jimpitan (security money)</td>
<td>250</td>
<td>0.031</td>
<td>Daily</td>
</tr>
<tr>
<td>2</td>
<td>Funeral fund</td>
<td>500</td>
<td>0.062</td>
<td>Monthly</td>
</tr>
<tr>
<td>3</td>
<td>PKK (family welfare assistance) fund</td>
<td>300</td>
<td>0.037</td>
<td>Monthly</td>
</tr>
<tr>
<td>4</td>
<td>Solid waste disposal (neighbourhood level)</td>
<td>3,000</td>
<td>0.375</td>
<td>Monthly</td>
</tr>
<tr>
<td>5</td>
<td>Solid waste disposal (sub-district level)</td>
<td>1,200</td>
<td>0.150</td>
<td>Monthly</td>
</tr>
</tbody>
</table>

30 Based on a survey conducted by Rentaningdyah and Fatahillah, 2004 (courtesy of YPR).
31 A\$ 1 = Rp. 8,000.
Payment for the funeral fund, women’s social club, and solid waste disposal are collected in each RT, either through community meetings or door-to-door (by members of the RT committee). The funeral fund enables a funeral ceremony to be paid for when needed, while the PKK fund supports the women’s social activities in the neighbourhood.

Figure 5.43 Activities in everyday life, recorded in January 2008 (drawing by author).

Table 5.3 also shows the two levels of solid waste management: the neighbourhood and the sub-district. At the neighbourhood level, the waste is collected door-to-door by a human-pulled cart, then dumped in a temporary waste collection site near the Sumo Indah area on the eastern lane (Figure 5.45 Right). From there, the responsibility is transferred to the sub-district government who
provides a vehicle to transport the waste to the municipal waste collection centre in southern Yogyakarta (Figure 5.45 Left). The temporary waste collection site also becomes a source for scavenging by the residents of Sumo Indah, who sort the waste and keep selected items in their sheds. This hierarchy of waste collection, from the ‘informal’ neighbourhood level to the ‘formal’ subdistrict level, demonstrates not only the connectivity between these two juxtaposed systems, but also the capacity of residents to maintain the adaptability of their self-developed informal waste collection system.

Figure 5.44 Security post near the eastern gate (photo credit: author, 2008).

Figure 5.45 Garbage collection site.
Sand mining is an industrial-commercial activity, which routinely occurs in the same territory, near the waterfall on Codé River (Figure 5.46). Throughout the day miners collect sand and small rocks within close proximity to the waterfall. Thereafter, they separate the sand from the rocks, using square chicken mesh, then sell the sand to the construction people or to a building material distributor, such as those located along Colonel Sugiyono Street. Data on the number of sand miners at the time of a survey (January 2008) was not available, but an archive of survey conducted in 2004 indicates that there were seven people working here. In 2004, these miners had formed an association, which conducted monthly meetings, whereby each member collected a sum of money to maintain their organization, which continues today.

Besides sand mining, there are many other commercial activities visible in Tungkak. The most apparent ones occur along Colonel Sugiyono and Sisingamangaraja Streets, ranging from formal convenience stores to informal gasoline retail shops. On the narrow lanes in interior Tungkak, informal movable

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32 Based on a survey conducted by Rentaningdyah and Fatahilla, 2004 (courtesy of YPR).
food and vegetable stalls can be found stopping regularly either in front of a house or inside the security post (Figure 5.47).

![An open food stall in front of the owner’s house (photo credit: Muklas Setiawan, 2007).](image)

![Selling daily groceries in the security post (photo credit: author, 2008).](image)

**Figure 5.47** Informal commercial activities.

![Play on a shared public space in front of RW 19 Hall (photo credit: Muklas Setiawan, 2007).](image)

**Figure 5.48** Play on a shared public space in front of RW 19 Hall (photo credit: Muklas Setiawan, 2007).
Community gatherings, either public or private, rarely occur in the outdoor areas. They mostly take place in the RW community hall, except for the annual independence celebration, which usually takes place on the badminton court near the community hall (Figure 5.48). In everyday life, residents use the court for drying clothes, hanging out, and as a children’s playground in addition to sporting activities. Most residents of Tungkak do not launder their clothes in the river anymore. In fact, tracing of the CAP mapping (Figure 5.18) shows that defecating on the river was seen as a part of environmental problems. This shift in attitude seems to be a result of the growing number of public and private MCK (Bath-Laundry-Toilet) facilities across Tungkak.

Apart from the easily observed activities discussed above, there is a seemingly hidden activity of occasional illicit gambling, whereby gamblers buy and sell a sort of lottery on certain locations in the neighbourhood. An informant explains that on these spots, gamblers are not only engaged in the lottery selling, but also exchanging information about the predicted numbers that will come up in the draw. This activity has been part of the daily life of some residents for years, although others have often tried to eradicate it.

In sum, everyday life in Tungkak involves a wide range of collective (public) activities that have been transformed into systems of neighbourhood maintenance, such as night patrolling and garbage collection, which can be found typical in a normal kampung. All of these activities could only thrive when residents have reached consensuses about how the neighbourhood should be maintained. The achievement of such consensuses could only be gained when those who take part in the decision-making have a strong bond to the place they live – a de facto secure tenure in UN-Habitat’s words. Furthermore, while leaders of Tungkak claimed that Tungkak’s reputation of a notorious neighbourhood in the past has vanished, today’s Tungkak still own a remnant of what the locals call ‘community disease’ (residents with anti social behaviour). A social problem the community continues to battle collectively.
5.6. Current changes and upgrading

The most apparent event that significantly changed the built environment of Tungkak was the reconstruction project after the 2006 earthquake. However, even before that, changes and upgrading had frequently occurred as a result of both self-help and external intervention over time.

![Image](a) Ex-homeless housing units (row houses) in January 2008 (photo credit: author, 2008).

![Image](b) New painting on the same building as (a) in September 2008 (photo credit: author, 2008).

![Image](c) Ex-homeless housing units (row houses) in January 2008 (photo credit: author, 2008).

![Image](d) Vertical extension of the same building as (c) in September 2008 (photo credit: author, 2008).

Figure 5.49 Progress of housing improvement within seven months.

Self-help interventions in the appropriation of built environment have emerged continuously since the genesis of this neighbourhood in the late 1970s. The construction of interior partition walls that had converted the ex-homeless housing units into a series of houses was the earliest form of self-help intervention. House extension is the most visible example of self-help intervention continuously occurring in Tungkak. Longitudinal observation of housing shows dynamic construction activity within less than a year after the 2006 earthquake. Such activities range from simply changing the colour a house to the construction of
additional rooms (Figures 5.49a to 5.49d) and even the building of a new house (Figure 5.50).

![Before: vacant authorised property used for community soccer field, before housing construction (photo credit: author, January, 2008).](image1)

![After: ongoing housing construction reduces the size of soccer field (photo credit: author, September 2008).](image2)

**Figure 5.50** Construction of a new (formal) house within seven months.

![Before: old bathrooms (photo credit: YPR, 2004).](image3)

![After: refurbished bathrooms after GTZ-funded reconstruction project (photo credit: Muklas Setiawan, 2007).](image4)

**Figure 5.51** GTZ-funded bathrooms reconstruction.

External intervention occurs through the state and NGO involvement in the appropriation of built forms. The most recent intervention was the reconstruction project after the 2006 earthquake, which was conducted through collaboration between Provincial Government, German Government, and was facilitated by an NGO. The CAP discussed earlier suggests that the reconstruction project provided
not only an opportunity for the residents to rebuild their devastated neighbourhood, but also to create some facilities not related to repairing the damage and destruction (Figure 5.51), but also constructing new building functions partly identified through CAP, such as a children’s playground (Figure 5.52c) and even a fire hydrant and a new badminton court (Figures 5.53). An informant argues that the transformation of such a hidden open space into a children’s playground was actually a strategy to prevent land speculations. Before this playground was constructed, the area was a vacant property formed after an irrigation gully was covered with concrete slabs (Figure 5.52b).

Figure 5.52 Children’s playground as a solution for potential land disputes.

A community hall in North Tungkak was totally destroyed by the 2006 earthquake, but as discussed earlier, an informant initiated the reconstruction of this building (Figure 5.54b) while extending it for a musholla (prayer room) on the southern side (Figure 5.54d). A series of rooms to house a community-based recycling program has also been constructed across the lane from the hall. This building reconstruction is a part of the numerous state assistance projects for
settlement upgrading. Figure 5.55 maps the state intervention in the appropriation of the built environment. It shows that the construction of eastern lane was fully supported by the government. All sports facilities including the new children’s playground were also fully funded by the state through the GTZ reconstruction scheme implemented in the post-earthquake period, in response to the CAP (Community Action Planning) outlined previously. The earthquake has thus invited enormous state intervention in the area, which according to one informant (representing the German government) has been focused solely on the humanitarian issues and completely disregarded issues of land tenure.

**Figure 5.53** State assisted infrastructure improvement.
Figure 5.54 Reconstruction of the RW 19 community hall.

The co-existence of state-constructed built form can be seen as a type of intervention. This refers to the state managed built forms that co-exist on the same type of land, on the same site, or in a close proximity to community buildings, including housing. There are four government buildings that co-exist with Tungkak housing on the Sultan land; they are the district government office, the police station, the state elementary school, and the sub-district government office, in addition to the community health centre and post office that stand on the state controlled land. The district government office described earlier, shares the same
site (the former site of the demolished ATPS buildings) with the RW 18 community hall, while the sub-district government office lies between the row houses along Sisingamangaraja Street. The state elementary school, which serves Tungkak and the surrounding areas, shares its front yard with the residents of the ex-dormitory housing, and has installed a high fence along the backyard to prevent people (the ‘back people’) using the facility.

In summary, a longitudinal observation on the changes and upgrading of built form over time shows a gamut of appropriation and new construction initiatives, which involved external actors, predominantly the government (Figure 5.55).
Although the 2006 earthquake accelerated such development initiatives, the community’s strategy of inviting external agents to intervene in the development of Tungkak had occurred before the event of the earthquake. The construction of the eastern lane and RW 18 community hall is one example. External intervention can only occur through residents’ participation, which is possible only after they have established a stable social fabric - an indication of a collective effort in strengthening the community’s identity.

5.7. Discussion

<table>
<thead>
<tr>
<th>Early 1900</th>
<th>Construction of the homeless housing</th>
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<tr>
<td>1945</td>
<td>Independence of Indonesia</td>
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<td>1948</td>
<td>Dutch retook Yogyakarta - homeless housing closed</td>
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<td>1949</td>
<td>Dutch left Yogyakarta - homeless housing reopened</td>
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<tr>
<td>1950</td>
<td>Installation of the barbed wire</td>
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<td>1962</td>
<td>Construction of ATPS</td>
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<tr>
<td>1965</td>
<td>Eradication of PKI (Communist Party of Indonesia)</td>
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<td>1972</td>
<td>KTP (Resident's ID Card) granting for general election</td>
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<td>1976</td>
<td>Closure of facility and administrative authorization (RT status granting)</td>
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<td>1977</td>
<td>General election</td>
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<td>1983</td>
<td>OPK (Operation of Crime Eradication)</td>
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<td>1989</td>
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<td>2004</td>
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<td>2007</td>
<td>Reconstruction</td>
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<td>2008</td>
<td>End of reconstruction</td>
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Figure 5.56 Key events in Tungkak development.\(^{33}\)

\(^{33}\) Figure presentation inspired by the work of Mukhija (2003).
This section uses the analytical tools described in Chapter 3, to understand how the continuity and change of the built environment of kampung Tungkak convey the residents’ tenure attainment over time.

The historical analysis of Tungkak suggests that the settlement begins to be regarded as a kampung only after the abandoned homeless housing units were re-territorialized by new residents, and authorised by the government through merging it to RK Karanganyar a few years later. In Deluze and Guattari’s (1987) terms, the state abandonment of the homeless housing units can be seen as a deterritorialization, which enabled the internal reterritorialization (spatial subdivision) by residents - a tree-like process of institutionalisation was replaced by a rhizomic process of informal encroachment. However, this was not a simple process, as seen by the fact that the internal rhizomic encroachment began in the 1950s at the same time the institution was surrounded by a barbed wire fence. Therefore, the space was strongly territorialized and tree-like at a ‘macro’ level yet deterritorialized and rhizomic at a ‘micro’ level. The state removal of the barbed wire fence largely coincided with the withdrawal of state funding and the integration of this community into a new kind of territory – the RT’s in 1976. At one level this was a reterritorialization but it also unleashed new encroachments in the vacant buildings along Sisingamangaraja Street and on the vacant land between the institutional buildings.

While the physical order (Habraken, 2000) at this stage remained unchanged, the territorial order was not the same as it had been34, as most of the new residents who occupied these vacant buildings were of a higher social status. The new residents moving into these buildings can be construed as a form of gentrification, since they were soon complaining about the activities of the scavengers and eventually displaced many of them downhill towards the riverbank. As the process of encroachment continued, it also gradually changed in tenure type. While residents could trade the internal encroachments, this was not really seen as a form of ownership so much as a reimbursement of interior and exterior appropriations. The tenure type was essentially Use/Use, because these people use both the

34 The triad of physical order, territorial order, and codes is part of Habraken’s (2000) model of ‘environmental game’ (see Chapter 3).
government buildings and the Sultan land. Yet as these residents encroached upon the land between the former homeless housing units, these accretions were effectively owned housing on Sultan land – the tenure type slipped to become a hybrid of Use/Use and Own/Use. As they moved east towards Codé River, and constructed new houses, the tenure type became Own/Use – first on Sultan land and then on state land after they crossed the (invisible) boundary of these lands, as depicted in Figure 5.20. This slippage of tenure types extends what Brillembourg (in Schroder, 2005) has described that informal settlement development is about anticipating and retrofitting, except that in the case of Tungkak, what has to be anticipated and retrofitted is not only limited to the production of built forms, but also covers various other tasks including the social division.

The affluent residents who occupied the vacant buildings along Sisingamangaraja Street often claimed themselves as having a higher social status than residents occupying the eastern part of Tungkak. This division yielded a new territorial order in Habraken’s (2000) words: the front people and the back people (west/east), which cut across the former ‘north/south’ division of Ciptomulyo (trainees zone in the north) and Gatitomo (trainers zone in the south), which coincided with the current administrative division of Tungkak into RW 18 (south) and RW 19 (north). The administrative division often has no link with the neighbourhood’s social condition (e.g. Sullivan, 1986 and 1992), but the administrative division of Tungkak (Figure 5.7) cannot be separated from the past social segregation of this kampung. The area of RW 18 was the site of the trainers’ compound before the closure of the institution. These trainers often saw themselves as having a higher social status than the residents of Ciptomulyo trainees’ compound (now RW 19).

The metamorphosis of Tungkak from a government institution to a normal kampung shows a significant role of the state in the development, from providing basic amenities such as electricity and water connections to the construction of various types of public facilities, especially after the 2006 earthquake where the state involvement in the reconstruction of this kampung intensified. In semiotic terms, the built forms produced can be seen as signifiers of the state’s acceptance of the continuity of this kampung. In DeLanda’s (2006) assemblage concept, these built
forms can be read as expression of territorializing forces that stabilise the *kampung’s* identity through boundary sharpening. The construction of the entry gate after the completion of a paved street lining Codé River, for example, sharpens the existence of Tungkak to the public, meaning the previously hidden Sumo Indah area (the area inhabited by the back people) is now visible and permeable. It can be construed as an increasing level of confidence of these people to be known to the public.

A strong *kampung* identity is also expressed through a solid social network manifested in routine community activities. At Tungkak, the collection of money for neighbourhood maintenance through night patrol and community meetings shows an established system that assures a longer lifespan for the neighbourhood. In Gidden’s (1984) terminology, such routine maintenance contributes to the attainment of ‘ontological security’, which as Saunders (1990) suggests, is an integral part of tenure security.

Another pertinent finding worth noting is the role of RT/RW leaders in the development, who represent both the state and the residents. In the case of the *Sumo Indah* development, an RT chief insisted the residents of Sumo Indah obtain a KTP or they would not be permitted to live there. Here, he represents the state as an agency of good order. He threatens the existence of *Sumo Indah* residents for a good reason: to obtain the most basic ingredient of secure tenure, that is, the KTP. With this document, one’s existence is acknowledged and he/she can get access to many state-supported facilities that may lead to the attainment of *de facto* secure tenure.

However, when the 2006 earthquake devastated the *Sumo Indah* area and left the residents without homes, the above RT chief negotiated funding with the provincial government to rebuild the community hall, which became a temporary shelter for these earthquake victims. Thus he represented the community who urgently needed support from the authorities. The support received not only covered reconstruction of the community hall, but also included reconstruction of the whole *kampung*. Thus while 2006 earthquake can be regarded as deterritorialization, it enables another reterritorialization, as residents of Tungkak could utilise the government funding to collectively create many community assets (Figures 5.52 to 5.54), which led to a better living environment in Tungkak than had existed before the disaster struck. While these improvements might not directly
influence tenure condition of each household, it assures the continuity of existence of these residents in Tungkak, which can be seen as residents’ attainment of *de facto* secure tenure.
CHAPTER 6

CONCLUSIONS

This thesis begins with the term ‘speculative settlements’ to frame the overall thoughts of the research. While such a term seems contentious, I would argue that it represents the core characteristics of kampung development. In dictionary definition, the word ‘speculate’ has two main meanings: to ‘form a theory or conjecture about a subject without firm evidence’, and to ‘invest something in the hope of gain but with the risk of loss’. The kampung residents in my case studies hold the view, without any firm evidence, that if they invest in their built environment in certain ways - on particular lots and using certain materials and forms - that these investments will pay off in terms of increased tenure. These speculations often turn out to be correct and the buildings become ‘settled’, which is why this thesis is called ‘speculative settlements’. These communities have become settled over time through such speculative activities. This is a matter of both continuity and change because while speculation is often seen in the form of change (a new investment in a wall, room, floor, path, etc.), the continuity of such change over time becomes the evidence for further speculation. The built form is thoroughly implicated in this speculative activity because it operates to signify both continuity and change in the settlement - under conditions of tenure ambiguity, urban morphology becomes evidence of tenure. While not firm evidence, this is the evidence that counts in this speculative market, this urban assemblage. The built form is public evidence that operates as symbolic capital in a field of power (Bourdieu, 1993).

Morphological tenure mappings in both case studies reveal a very complex range of conditions operating within the framework of what can be easily defined from the outside as an ‘informal settlement.’ There is a broad range of tenure types and levels of tenure security, just as there is a broad range of housing standards from the overcrowded slum to well serviced housing.

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1 These definitions are quoted from the Apple electronic dictionary (2007).
Some of the more problematic areas are those such as Atas with a relatively high level of authorised control by landlords. By contrast the newer areas of encroachment are associated with higher levels of both speculation and opportunity. Some parts of these assemblages appear locked into conservative regimes that do not easily change - it is not easy to see how the slum conditions in the denser parts of Atas could be relieved. Most of these households are land renters (pengindung) and they rarely have the opportunity to build or gain full ownership. By contrast, those who were able to move to Lengkong and Bawah seem to have mostly established more permanent houses with capacity for expansion.

The paradox is that Lengkong and Bawah have less formal and more ambiguous tenure than Atas, but more secure. A further paradox is that the successful encroachment into Lengkong and Bawah seems to have unlocked the slum of Atas. Tenants (land renters) in Atas and Kricak are locked into a situation that is ultimately authorised by the state, even though the housing is unauthorised. In this arrangement, the form of the housing in Atas does not have much impact on the tenure arrangement, as there is no threat of demolition because the landlords need the renting to continue. Renters’ houses cannot easily be upgraded through a speculative process without removing the landlords. Yet the encroachment onto Lengkong and Bawah created opportunities for Atas and Kricak renters to speculate, a process that enables some of them to eventually return to Atas after using their speculative profits to purchase the land under their original Atas and Kricak houses from the slum landlords. In other words, the encroachment along the riverbank has enabled residents not only to escape the slum, but also to return and upgrade it under the condition of more secure tenure.

Furthermore, the above speculation produces absentee landlords in Bawah and Lengkong, where they neither own the land nor live there but put their houses up for rent. In the Tungkak case study, a scavenger became a landlord upon his reclamation of an informal public waste dumping ground, through which he made a profit by leasing and selling this claimed land to other scavengers. Gradual appropriation and commodification of land has thus been the key strategies in maintaining the existence of both Sidomulyo/Kricak and Tungkak. Commodification
that turns vacant property into a kampung uses built forms as a primary agency. The built environment produced over time follows a starter-stabiliser pattern.

**Starter** is the function of the built form in starting up the process of a territorial (tenure) claim, the very beginning of informal settlement development (assemblage formations). At this stage, the house is the built form typically used to perform such a reterritorializing function. The territorial claim in informal settlement development does not start from the occupation of a purely uncontrolled vacant space. Instead it tends to begin with a claim over an existing weakly controlled space. In most unauthorised parts of Sidomulyo/Kricak and Tungkak, neighbourhood development began with the construction of houses, which took place gradually and lengthily. The slow process occurred not only because of residents’ lack of economic capital, but also because such a speculative process requires enough social capital, and an adequate number of agents capable of carrying out the development collectively within certain period of time. The Bawah development, for example, took over ten years to reach a population great enough to meet the requirements of the administrative authorisation (RT/RW), while Lengkong took five years. During this initial period of time, houses were the only built forms, a phenomenon similar to that occurred in Tungkak.

**Stabiliser** is the function of the built form in communicating non-verbally the stability of collective tenure and identity. By stable tenure I mean that displacement, due to the unauthorised status of housing, is no longer a threat to the residents. It also reflects a condition whereby the residents are capable of setting up and maintaining the rules to manage the kampung. Built forms that fall under this category are gates and public buildings. In both Bawah and Lengkong, gates were constructed shortly after these neighbourhoods received administrative authorisation. Gates can thus be regarded as a marker of achievement (a transformation of social capital into symbolic capital), because to get an administrative authorisation, a neighbourhood must have a stable social assemblage with a certain number of households willing to live permanently in such a

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2 In Rapoport’s levels of meaning concept (Chapter 4), this way of communicating falls within the category of ‘middle-level meaning’.

3 In the Habraken’s (2000) triadic of the environmental game (Chapter 4), this condition would be termed ‘understanding among agents’.
neighbourhood. The existence of a gate can thus be construed as an indication of residents’ collective attainment of secure tenure. It also unlocks the invisibility of a previously hidden neighbourhood, such as Lengkong and Sumo Indah (Tungkak), which also highlight residents’ higher confidence in maintaining their territoriality - a part of identity stabilisation in DeLanda’s (2006) assemblage concept.

The role of public buildings as a stabiliser is more complex than that of gates because, unlike gates, public buildings accommodate residents’ activities. As with gates, public buildings in these kampung were constructed after the community established the social networks that were capable of maintaining the day-to-day living in the neighbourhood. However, while gates are typically attached to an RT, public buildings usually represent social and economic networks at a larger (RW) scale. In Sidomulyo and Tungkak, the community centre (RW hall) caters to the social activities of the whole RW. It accommodates the need for the social gathering of all the RTs within one RW. Therefore, the community centre is an expression of how a kampung works as a community - a place where most of the collective decisions that affect the future of a kampung are made.

Public buildings can also play a decisive role within a kampung, although such a role might not have any implications for residents’ tenure security. The construction of a community centre (RT hall) in Kricak is one example. While this building is needed by the Kricak residents to accommodate social activities, the exclusive usage of such building prevents the possibility to reconcile Kricak with Sidomulyo, which has been locked in an uneasy relationship. Similarly, the construction of RW 18 hall in southern Tungkak reinforces the social division between the north area (RW 19) and the south (RW 18) after the implementation of the RW system in the late 1980s.

Therefore, the public symbols of gates and public buildings play a key role in reinforcing the legitimate claims for the neighbourhood and the claims for its housing. However, at the same time, the symbol operates to reinforce the social division between neighbours. They can stabilise place identities in the best and worst of ways. Gates express the ‘sharpness’ - as DeLanda (2006) would put it - of a kampung’s place identity. They communicate the stability of kampung as a territory. Stability in this sense means a condition where residents collectively defend
themselves from the threat of tenure insecurity. This claim implies that in informal settlement, tenure security cannot be seen as an individual (household) possession, because tenure attainment in kampung development is an outcome of the larger assemblage formation, an organised whole produced through the association of parts.

Figure 6.1 A gate is constructed as a starting step (starter) of a real estate development in Yogyakarta (photo credit: Ilya Maharika, 2007).

The hierarchy of house as the starter and gate as the stabiliser highlights the underlying premise of this research that the process of informal development is the opposite of formal development. The phenomenon typically found in the development of (formal) gated enclaves in Yogyakarta (Figure 6.1), shows how a gate is used to initiate the development of a real estate complex. Unlike in kampung development, a gate in this example functions as a starter, a means to attract buyers of the house. There is no question about tenure security here, because tenure security has been achieved even before the housing construction commences.

Besides the functions of built forms described above, the sense of permanence (expressed through the quality of building materials) explains tenure characteristics of the different households. Under the unwritten customary leasing agreement (ngindung) with landlords, land renters in Atas and Kricak are prevented from building the permanent structures (brick and concrete). Such agreements, on
the one hand, allow renters to build their own houses, but on the other hand, lock renters into impoverished conditions, albeit with authorised land tenure. By contrast, residents of unauthorised neighbourhoods like Bawah, Lengkong, and Tungkak enjoy the liberty of permanent construction. Thus while legal tenure is commonly perceived as more secure than unauthorized property occupation, the low threat of eviction in both Sidomulyo/Kricak and Tungkak suggests that there is no clear causal relationship between informal tenure and insecure tenure. The sense of permanence of the buildings becomes a sense of permanence in terms of people’s rights to the land they have claimed.

One of the more interesting local issues raised in this thesis concerns the status of Sultan land which forms one part of kampung Tungkak. Residents of Tungkak utilized the Sultan land under the magersari (use rights) scheme. Such land tenure, as outlined in Chapter 3, is ambiguous in the sense that it is not the same as state ownership nor ‘crown land’, yet is seen by many to be available for informal settlement due to a moral obligation of the Sultan to protect subjects of the Kraton. After the 2006 earthquake, it became clear that there was no impediment to a more formalized development of this land. It remains to be seen just how far such moral obligations might extend as such land becomes formalized and as the Sultan’s Office takes a more commercial approach.

Issues of tenure security/insecurity cannot be divorced from the role of the state in kampung development. The absence of threat of displacement in both case studies suggests a laissez-faire development policy. However, in these two cases it should be noted that the state has no clear reason to benefit from intervention. These settlements are not strategically visible on the image of the city. They pose no threat to political stability, and are not strategically important for urban development. The influence of the state within these settlements can be understood through the phenomenon of ‘tagging’.

The meanings and values of built forms can often be identified through the tags or signs of state intervention attached to them. The tablets (signed by the mayoral candidates) attached to the front yard of community halls of Kricak and Sidomulyo are examples. These tablets work to produce both political legitimacy (for
the Mayor) and tenure legitimacy (for the community). The tags found in the two case studies can be categorised into two types: textual and non-textual.

A textual tag is a result of placing a written sign on the built form (Figure 6.2), which usually describes the name of a project and its provider, while the non-textual tag occurs in the form of an instrument attached to the built form, such as electricity (Figure 6.3) and water meters. These two types of tag can be found spreading across both Sidomulyo/Kricak and Tungkak, including in the areas with unauthorised tenure. Within the context of the state-kampung relationship, these tags are signifiers of formalisation and legitimacy.

![Textual tag: a sign on a public bathroom in Lengkong](photo_credit: author, 2008)

In Bawah and Lengkong, despite their highly ambiguous tenure, electricity meters can be found on most houses. Although some residents still occasionally use the river for bathing and washing, they have managed to access funding from the state to build public bathrooms (Figure 6.2). Similarly, residents of Tungkak’s ex-homeless housing can enjoy normal state electricity (Figure 6.3), water supply, and public bathrooms. By contrast, the sparse electricity meters in the impoverished areas of Atas and Kricak illustrate that many residents in these areas still rely upon informal (shared) electricity connection, albeit with authorised land tenure. In other words, informal ownership does not prevent the residents from getting access to

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4 While the term ‘non-textual’ might not be precise in representing such phenomenon, my intention here is to read the signs other than text, through which the presence of state involvement can be identified.
formal infrastructures. This highlights my claim above that there is no causal relationship between informal tenure and insecure tenure as demonstrated in both case studies. However, while there was no direct relationship of formal electricity to formal tenure, the electricity meters do operate as signifier of the state and of formal legitimacy to some degree. Yet the practice of shared electricity represents a strong social network in these kampung, a high social capital to maintain the continuity of day-to-day activities, which is an essential element of ontological security in the words of Giddens (1984).

![Figure 6.3 Non-textual tag: electricity meters (circled in white) in Tungkak (photo credit: Muklas Setiawan, 2007).](image)

Furthermore, as typically appears on the entry gates, the tag of a neighbourhood name signifies the administrative authorisation of a neighbourhood (RT/RW). Administrative authorisation is a critical step towards the attainment of tenure security. Diachronic analysis of both kampung Sidomulyo/Kricak and Tungkak shows that the granting of administrative authorisation was based on two approaches: top-down and bottom-up. The top-down approach suggests that the initiative to grant authorisation comes from the state. This operated in Atas, Kricak, and Tungkak. However, while Atas and Kricak were authorised in the post-independence of Indonesia, Tungkak’s initial administrative authorisation in the
1970s was based more on political purpose, that is, to make dwellers of the homeless housing eligible for participating in the general election. Thus enabling the vote from these people to be legally counted.

By contrast, the bottom-up approach suggests that residents’ initiatives are the starting point of the authorisation process. Bawah and Lengkong are examples of how the ‘invisible’ residents of informal neighbourhoods made themselves ‘visible’ within the formal system, by negotiating administrative authorisation with the state. Residents’ visibility in the state administrative system materialises through the possession of a KTP (Resident’s ID Card), which can be used to unlock access to several key services from the state, and therefore lead these residents to gain what the UN terms *de facto* secure tenure.

The research also finds that the urban spatial division into administrative units of neighbourhood (RT/RW) leads to two seemingly juxtaposed implications. Viewing this at a ‘macro’ geographical scale (Sub-district and above), such division tends to segregate the social assemblage of the neighbourhoods. The relationship between Kricak and Sidomulyo is one such example. Separation of Atas (now part of Sidomulyo) from Kricak in late 1989 has, until today, kept these two neighbourhoods socially segregated. Similarly, spatial division of Tungkak into two RW in the same year socially divided the neighbourhood into ‘north’ and ‘south’, which seems to replicate the division of this settlement in the past (before the closing of the homeless housing units in the 1970s), when the homeless housing units were divided into ‘trainees’ zone’ (north) and ‘trainers’ zone’ (south).

However, at a ‘micro’ scale (up to the RW level) the strong social cohesion between parts (RT) within a whole (RW) is apparent. This seems to be one of the key factors that determine the territorial sharpness of a *kampung*. Lengkong, for example, is physically detached from the rest of the RTs within Sidomulyo, but the past social connection between Lengkong residents and the renters of Atas have made Lengkong socially close to Atas. Similarly, many *waria* (transgender people) who rent houses in Bawah are socially well connected with *waria*/renters of Atas. In Tungkak, the neighbourhood administrative division (RT) of each RW seems to be

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5 These people used to claim the lands in Lengkong, and linked up with Lengkong’s residents through the scavenging network
Speculative Settlements: Built Form/Tenure Ambiguity in Kampung Development

overshadowed by the fact that this *kampung* has been socially divided into the affluent ‘front people’ and the poor ‘back people’. However, the role of community leaders in accessing state assistance for slum upgrading and post-earthquake reconstruction, led to the social consolidation of among the residents, which seemed to narrow the gap between the ‘front people’ and ‘back people’, a form of *equilibrium* in Habraken’s (2000) words.

*Kampung* have become a part of the urban character of Indonesia. The developments of Sidomulyo/Kricak and Tungkak over the past three decades demonstrate that urban *kampung* in Yogyakarta are largely products of ‘community-driven’ actions rather than ‘state-driven’ ones. The dominance of *kampung* in the constellation of urban settlement in Yogyakarta suggests that formal planning has not been able to cope with the rapid pace of *kampung* development. While the local government might claim that they have prepared the master plans, building codes, and other planning instruments, the two case studies show that major decision-making on spatial arrangement comes from the residents of both *kampung*, including the decision to obtain state supported facilities (such as electricity, water, public bathrooms, etc.).

The paradox is that, while the state has long been implementing the RT/RW system as a surveillance instrument, this system has become a means for tenure stabilisation for the residents of both Sidomulyo/Kricak and Tungkak, instead of an agency through which an application of the state’s formal planning operate. In Sidomulyo/Kricak, the granting and modifications of administrative territory were largely community-driven. Meanwhile in Tungkak, initial administrative authorisation was based mainly on the political influence (to gain the vote in a general election), instead of meeting the prerequisites of spatial planning. Yet the residents played a central role in modifying the administrative boundary as well.

Community-driven approaches to settlement development encapsulate the transformation of the ‘code of no-code’ (Brillembourg et al, 2005) into an accepted norm for development. Following Deleuze and Guattari (1987), such transformation might be described as codification of rhizomic processes\(^6\), which seems to

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\(^6\) Bonta and Protevi (2004) would call it ‘striated rhizome’.
characterise the urban settlement development in Indonesia. Of course, codification in this case does not have to be a written norm, but is instead an understanding among agents (Habraken, 2000) about the rules of the development.

While state involvement in such a community-driven approach is not uncommon, the central power to drive the development comes very much from the community. The continuing involvement of the state in this ‘game’ suggests that such an approach is not only speculative from the community’s view, but also speculative from the state’s perspective, because the state does not have full control of these parts of the city and its infrastructure.

The issue of the role of community and RT leadership is by no means simple. The stabilisation role of the RT/RW system is also conservative in other ways - it is overwhelmingly played by male residents and operates under the patronage of the more formal state administrative apparatus. Sociological investigation of such gendered leadership lies outside the scope of this thesis but that is not to suggest that it is unproblematic. These community leaders play key roles in the development as the mediators of tenure ambiguities. As indicated in Chapter 1, Roy (2004) has suggested that these ambiguities, flexibilities and contradictions of tenure can be part of a strategy of state power wherein marginalised males are given roles as community leaders under conditions of patronage. She argues that the ambiguities of tenure can be the condition for such power. My mapping of these tenure relations clearly shows how ambiguous they can be, and how deeply entrenched this ambiguity is. RT/RW leaders are key mediators between formal and informal systems - they are both the enforcers of certain kinds of formality and the protectors of certain kinds of informality.

As poorer sections of the community seen to harbour crime and political dissent, both of these case study places were targeted as part of state initiated violence in both 1965 and in the early 1980s. The legacy of these events linger in these communities in some ways and have had an impact on the struggles over land tenure because of the ways a negative place identity was initially constructed. The reputations of ‘Sidorujoyo’ and ‘Tungkak’, and those who live there, still have low symbolic capital within the larger field of Yogyakarta. And to some degree each of these places remains locked into difficult cycles of poverty. Each remains dependent
on particular low-income industries into which children may be inducted at an early age - rock crushing and parking gangs in the case of Sidomulyo/Kricak; scavenging in the case of Tungkak. This legacy has also played out within these communities as a form of internal social segregation where the most difficult places are segregated from the more stable. It is interesting to realise in this regard that the most promising processes and practices in each of these communities is the very act of producing more informal settlement - Bawah and Lengkong in Sidomulyo, and the recent riverbank development in Tungkak. These rhizomic and dynamic processes have in each case helped to both free up the stabilised cycle of poverty and also create the prospect of more secure form of tenure. One paradoxical conclusion is that informality and formality are necessary to each other, even that increased informality can be a path to more formal kinds of tenure security.

This thesis has focused upon the study of micro-spatiality and transformations of informal settlements using morphological approach - a methodology and analysis that is unusual in such studies. While the focus has been upon issues of tenure, the thesis has sought to understand tenure issues through an understanding of the morphology and morphological change of the settlements. This approach may seem inconsistent with approaches that seek to understand the political economy of development or those that analyse governance structures and up-grading programs. However, I suggest that this approach is complementary.

While factors that result in urban informality are often global (e.g. rural to urban migration) or national (e.g. failures of state planning), informal settlements cannot be reduced to such forces or their analytic frameworks. Informal settlements have continued to proliferate for decades in ways that are clearly related to global economies, politics, and governance. Yet top-down upgrading programs have largely failed and it has been long recognized that the primary resources for upgrading and development of such settlements lie with the residents themselves. Notwithstanding that imperatives for change at the global level are clear, residents do not and cannot wait for such change. It is to our better understanding of these micro-processes and forms of speculative settlement that this thesis seeks to make some contributions.
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APPENDIX 1
CONSTRUCTION OF KRICAK RT HALL
(Photo credit: Yoshi Murti/YPR, 2004)

Sand harvesting

Construction

Inauguration

Finishing
APPENDIX 2
RECONSTRUCTION OF EASTERN TUNGKAK AFTER 2006 EARTHQUAKE
(Photo credit: Yoshi Murti/YPR, 2006)
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Author/s:
RAHARJO, WIRYONO

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