

LAND USE TRANSFORMATIONS AND CHANGES IN BUILT HERITAGE CHARACTER OF RESIDENTIAL NEIGHBOURHOOD CORRIDORS WITHIN THE CULTURAL HERITAGE CONSERVATION CONTEXT COMPARATIVE STUDY BETWEEN SENOPATI STREET - KEBAYORAN BARU, JAKARTA AND PROGO STREET, BANDUNG

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ABSTRACT

Urban built cultural heritage are currently facing a significant threat from development pressure particularly in developing countries as a result of population growth, urban development, as well as economic growth, no exception to Indonesia. Jakarta and Bandung as one of the most established and fast growing metropolitan in Indonesia concerning population and economy are struggling to conserve their urban built cultural heritage. Although national law has encouraged cultural heritage conservation management in maintaining the existence of these historic residential neighborhood areas, both cities are still gradually suffering losses of distinctive character and appearance. Whether through the process of adaptive reuse, renovations, and even replacement, these changes detract from the townscape value of these invaluable urban assets. This problem is found quite evident throughout Jakarta and Bandung.

This paper summarizes the findings of research carried out into the gap between spatial planning regulations and practice of two different Indonesian cities about the urban heritage conservation of two historical residential corridors in Senopati Street - Kebayoran Baru, Jakarta and Progo Street, Bandung. It reviews and compares the effectiveness of different spatial planning regulations approaches of respective cities on delivering the urban heritage conservation outcomes in an attempt to find a solution and establish as well as indicate ways of improving the cultural heritage regulations in Indonesia. The research explores the land use transformation and changes of urban built heritage character and appearance of historical residential neighborhood areas along both observed corridors and questions the extent of this transformation and changes occurred in both locations. The research presents a method for measuring changes in land use and physical character in the historic built environment and descriptive analyses factors that might affect the loss of built heritage character in both areas.

Keywords: Built heritage character; Land use transformation; Progo street corridor; Senopati street corridor; Urban heritage conservation

1. INTRODUCTION

In some of the world's rapidly evolving cities, market forces and increasing land values dictate the regular replacement of buildings (Orbasli, 2008). What remains of the built heritage we see today is not merely historical relics, but part of the inherent character of a city which is an essential element that forms the 'sense of place' to which those living in or visiting is attach meaning and memory (Orbasli, 2008). No exception to Indonesia, urban built heritage in rapidly growing cities such as Jakarta and Bandung are currently facing a significant threat from development pressure as a result of population growth, urban development, as well as economic growth. The scarce of land supply in the center of the city exposes this urban built heritage to severe from commercialization pressure because of its land price.

Land use transformations and changes in built heritage character of older residential neighborhood had been found in cities such as Jakarta in Kebayoran Baru (Prabowo, 2013; Raus & Aditianata, 2011) and Menteng (Soedarsono, 2005) also conservation of villa and non-villa heritage area surrounding Gedung Sate of Bandung (Weishaguna & Kurniasari, 2004). These residential neighborhood areas are reluctant to lose its distinctive character and appearance; therefore it becomes an urgent issue to address in order to understand how these invaluable urban elements could further exist among the contemporary urban fabric.

Ideally, cultural heritage is formally safeguarded through legislation, and its conservation is guided through regulation and management mechanism established by the legislation (Orbasli, 2008). However, the paradigm of cultural heritage in Indonesia is still evolving through time along with the growing concern of built heritage. The scope of cultural heritage has undergone broader changes and amendment as urban built cultural heritage slowly faces a high threat from development pressure and the growing demand for public needs. The term conservation according to the Indonesian law concerning cultural heritage encompasses several efforts with the goal to retain the value that includes protection, development, and utilization of historical assets.

However the existing legal framework seem to have failed to deliver the desired outcome of conservation in historical neighbourhoods such found in Menteng (Soedarsono,2005), Kebayoran Baru (Prabowo, 2013; Raus & Aditianata, 2011) of Jakarta and several parts of conservation of villa and non-villa heritage area surrounding Gedung Sate of Bandung (Weishaguna & Kurniasari, 2004). Although the goal of urban heritage conservation in Indonesia is still in great debate among the policymakers, stakeholder and academician, the value of cultural heritage has been outlined by the Indonesian government on its cultural heritage policy document (Law No.11 year 2010 regarding Cultural Heritage), highlighting educational value, historic value, and cultural value as the primary national priority.

Residential neighborhood areas are dynamic places, places to live that continues to develop and grow. Therefore it requires a specific conservation policy that depends highly on the process of development control towards the transformation and the control of new development within the residential neighborhood area (Mellet, 1997 et al. in Soedarsono, 2005). The recent cultural heritage law has not embraced 'townscape values' (Orbasli, 2008) which associates not only the individual attributes of a building but also the contribution the area brings to a group of buildings, street or townscape such as residential buildings within a historic neighborhood. In this case, the group value of this historic neighborhood is higher than the value of the individual components and cannot be treated in isolation from their surrounding setting.

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Land use is the dominant element in urban development control, which consists of macro and micro land use (Shirvani, 1985). Although other cases confirm changes in land use patterns as an indicator of the city growth, land use changes in the built cultural heritage often cause damage to the original character of building and environment (Prabowo, 2013). The loss of specific characteristics of a residential neighborhood (Soedarsono, 2005) may cause identity crisis to a city, causing the loss of 'sense of place to which those living in or visiting, and these historic residential neighborhood area are reluctant to lose its distinctive character.

Following the new decentralization laws, the Spatial Planning Law 26/2007 stipulates the authority of provincial governments and district governments in spatial planning explicitly. Therefore, municipalities such as Jakarta and Bandung have a broader authority in spatial planning regulation, resulting in the possibility of different components included in the respective spatial plan that is not stipulated in the higher level of spatial plans. Zoning regulation is one of the new provisions in the Spatial Planning Law 26/2007 for enhancing development control. Zoning regulation is the primary reference for the issuance of a land-use permit in Indonesian cities (Rukmana, 2015).

This paper discusses the extent of land use transformation and physical character changes of two historical urban residential neighborhood corridors in two different Indonesian cities within the urban conservation context. The research addresses the implementation of both city's existing spatial planning regulations towards the effort in maintaining the character of the built heritage. It compares gap between spatial planning regulations and practice of the two different Indonesian cities concerning the urban built heritage conservation as an attempt to find a solution and establish as well as indicate ways of improving the cultural heritage laws in Indonesia.

2. METHODS

The research employs an exploratory comparative analysis which utilizes descriptive, analytical techniques and observation of existing physical elements of both corridors. As the most established and fast growing metropolitan in Indonesia regarding population and economy, Bandung and Jakarta both started from the reminiscent of the Dutch colonial city planning. In responding to the need for urban development and urbanization, these cities each had developed different spatial planning regulations. Two case studies were conducted, taking place in Senopati Street Corridor (Kebayoran Baru Built Heritage Area Jakarta) and Progo Street Corridor (Conservation Area of Villa and Non-Villa Old Town Bandung heritage of surrounding Gedung Sate Area Bandung).

2.1. Physical Character Observation

Physical character observation of built heritage developed by Soedarsono (2005) was utilized as a method for measuring character changes in the historic built environment. The methods were done by observing physical elements (buildings and surrounding environment) along the studied corridor. Observed physical factors includes 'building elements' which consists of: building massing, setback line, building height, roof typology, wall, entrances, balcony, openings, material texture and colour, and detailed ornaments; while the 'surrounding environment' comprises elements such as open public space, landscape and vegetation, street/corridor, berm, setback, fence, street furniture, and landmark. Assessment of physical features and tangible elements are done by observing in detail in a 'static and dynamic viewing' manner (Prak, 1977 in Soedarsono, 2005).

2.2. Land Use Transformation Analysis

Land use transformations are determined through comparing current spatial planning specifically land use zoning regulation plans stipulated by respective municipalities, existing land use of 2018, land use of the initial (previous-historic), and land use before the stipulation of the spatial planning policy of respective cities. The method of determining existing land use was done by observing main activities that occur within each land parcel. Comparative analysis is done by converting results using percentage.

3. RESULTS AND DISCUSSION

3.1. Brief Description of Historical Context of Study Area

3.1.1. *Senopati Street Corridor, Jakarta*

Kebayoran Baru was a part of the deliberate intervention known to be one of Indonesian new developed satellite town during the 1950s as described by Nas (2009). Based on the initial master plan in the 1950s (Source: Akihary et al., 2017), the area functions mostly as a residential area. The development was planned as a new residential town which was based on the neighborhood unit concept demonstrating a blend of West European Garden City and Javanese town planning principles. Building characteristics, shown by the facades, follows the rules of several architectural styles namely Amsterdam style, Indisch Bouwstijl Modern, Art Deco, Early Functionalism, Nieuwe Bouwen, Nieuwe Zakelijkheid, Flow Delft, American style, De Stijl, and Jenki. The physical environment characteristic is shown by a grouping of housing units by social and economic strata, with the park as a neighborhood center. Road network in Kebayoran Baru is radial-concentric and hierarchy of roads shown by the presence of the boulevard as the primary access to and from the Kebayoran Baru (Prabowo, 2013)

Kebayoran Baru along with its previously established colonial settlements has laid the basis for today's urban structure of Jakarta. Its strategic location exposes this urban built heritage to severe from commercialization pressure because of its land price. Kebayoran Baru that once was located in the periphery of predeceasing historic town now shifts to being the prime location of the metropolitan area due to the flourishing urban growth.

Legal efforts have been conducted to support and encourage the conservation of Kebayoran Baru heritage area, one of the first was the Governor Decree Number D.IV.6099/d/33/1975. The decree did not have a significant impact on the conservation effort since it was stipulated due to the absence of supporting planning tool and design guideline for the area. However, the off-kilter between the local conservation law and the domestic spatial planning policy had affected dramatically on the character of the built heritage. Prabowo (2013) discovers that Spatial Planning Regulation of Kebayoran Baru specifically on road function affects the most of occurred land use changes. Land use changes mostly took place along main road network, streets that function as primary arterial road, secondary arterial and central collector. This leads to significant changes in the characteristics of the buildings. Changes in building characteristics occur throughout Kebayoran Baru, only remains a few buildings that experience a minor change. In other words, physical characteristics have significantly changed from early development.

The emergence of commercial centers within the area also creates significant pressure on the loss of distinctive character. Development of Sudirman Central Business District adjacent to Senopati Street which was affirmed to be the primary activity center of Jakarta according to Jakarta Spatial Planning 2030 and District 8 a high-intensity mixed-use development located across Senopati Street are some of the examples. Senopati Street Corridor as one of many other streets contributing to the morphology of the historical Residential Area of Kebayoran Baru experienced a significant change regarding character. Senopati Street Corridor is about 1.4 km

in length with 20 m of ROW which currently applies a one-way traffic flow system for the vehicle. The streets separate Kebayoran Baru Heritage area from the high-intensity Sudirman Central Business District and District 8 development. The road connects Jenderal Sudirman Street – Arterial Street in Central Jakarta extend to South Jakarta – to Kebayoran Baru, a heritage region in South Jakarta. Although most of the historic buildings and the environment in Senopati street corridor have been adapted, added, and even replaced to over time, the morphology we see now still follows the layout of an earlier period. This remaining historic layout becomes an inherent character which is essential to the forming characteristic of the built heritage.



Figure 1. Jenki Architectural Style Residential Building in Wijaya Street, Kebayoran Baru and Building Layout.

3.1.2. Progo Street Corridor, Bandung

Bandung city was officially a colonial city along with the plan of relocation of administration center in 1906 by the Dutch colony from Batavia (Jakarta). Following the plan, Bandung was initially designed as a prestigious the government center (now Gedung Sate), supported by exclusive residential environment located in the Northern part of Bandung (Now Riau Area, Cihapit, Gempol). The relocation plan includes the development of spatial structure and building massing of Gedung Sate area and Villa non-Villa area of Gedung Sate-Riau. The design of the area follows the existing pattern of a circular axis, orientation, and visual axis with the main feature of vast open space as a landmark with the garden city concept.

To complete the planning document and the previous development, including the extensification of the Northern Part of Bandung and the rearrangement of urban kampong in the East and West. The development of building parcels and new buildings for residential use of villa were massively developed during 1931.

Progo Street Corridor was a part of the area designed to accommodate the need of governmental office building complex including a residential function to support the need of the employee consisting of several building typologies including the villa for the European settlers and non-villa and commercial building for Indonesian employee.

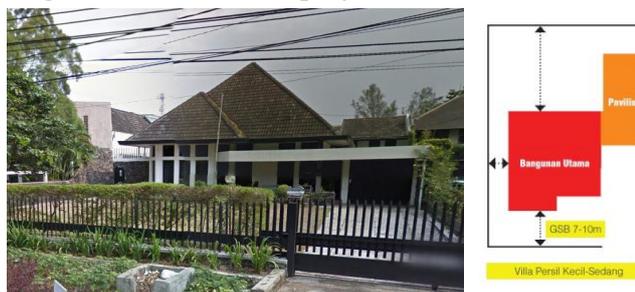


Figure 2. Original Residential Building Character of Progo Street and Building Layout.

Progo street is located in the center area of Bandung City, approximately 200m from West Java Local Government Office (Gedung Sate). The road is narrow due to being originally designed as the local street to facilitate the residential area during the colonial era. The corridor has not to experience specific changes concerning the function and still functions as a local road with ROW of 12m. Based on the initial 1945 master plan, the corridor performs entirely as residential areas.

3.2. Land Use Transformation Analysis

3.2.1. Senopati Street Corridor, Jakarta

Land use evaluated from the previous year (2009) compared to existing (2018) and land use plan stated within the Rencana Detail Tata Ruang (RDTR) of DKI Jakarta Province 2014-2030. RDTR or Detailed Spatial Planning of Jakarta controls land use with zoning regulations as law product. Zoning regulation for Senopati Corridor is mostly dedicated for Residential Zone.

Table 1. Comparison of Land Use along Senopati Street Corridor

Functions	1950 (Initial Plan)		2013		2018		RDTR 2014-2030	
Data Source	Akihary et al., 2017		Google Street View		Site Survey		Spatial Planning Regulation	
	Unit	(%)	Unit	(%)	Unit	(%)	Unit	(%)
Residential	50	100%	27	54%	26	52%	49	98%
Commercial	0	0%	22	44%	23	46%	1	2%
Mixed Use	0	0%	0	0%	0	2%	0	0%
Others	0	0%	1	2%	1	12%	0	0%
Total	50		50		50		50	

From the analysis, it is found that from 1945 to 2009, 28% parcels have undergone land use transformation from residential to commercial had occurred in Progo Corridor. The table shows the number of residential land parcels gradually decreases by 10 % from 2009 to 2018 while commercial land parcels had increased 13%. This indicates a gradually significant land use change of residential to commercial in line with the current zoning regulation stated in the Detailed Spatial Planning regulation of Bandung City 2035.

3.2.2. Progo Street Corridor, Bandung

In the Spatial Planning (RTRW) of Bandung City 2004-2013, heritage buildings were seen as the main focus character in supporting the conservation effort. The regulation had not acknowledged the environmental aspect. Nevertheless, it encourages functional transformation as long as the building character is maintained, strictly forbidding vertical building typology to be developed. Detailed Spatial Planning (RDTR) of Bandung City 2015-2035, however, acknowledges a more detailed approach to conservation. In maintaining the character of heritage areas, a functional transformation that implements adaptive reuse is permissible as long as it complies with the overall spatial regulation and environmental and building character is conserved.

Table 2. Comparison of Land Use along Progo Street Corridor

Functions	1945 (Initial plan)		2014		2018		RDTR 2015-2035	
Data Source	* Technical design guideline, 2015		Google Street View		Site Survey		Spatial Planning Regulation	
	Unit	(%)	Unit	(%)	Unit	(%)	Unit	(%)
Residential	39	100%	23	59%	19	49%	0	0%
Commercial	0	0%	11	28%	16	41%	37	95%
Mixed Use	0	0%	0	0%	0	0%	0	0%
Others	0	0%	5	13%	4	10%	2	5%
Total	39		39		39		39	

Source: * Technical design guideline of Bandung Old Town Area, Residential Villa and Non Villa, Bandung City, 2015 (*Panduan Teknis Perancangan Kawasan Kota Lama Bandung*)

3.3. Physical Character Analysis

3.3.1. Senopati Street Corridor, Jakarta

It is challenging to identify the original character of the built heritage in the existing environment. The unique character of the building was mostly one storey level. Based on the observation, the average current height of the area is two or three storeys. Functional changes of Residential to commercial generally follows the fences to look more open to the customer — neon box to distinguish the difference between residential buildings and commercial buildings. The façade of the existing building is affected by vehicular parking in front of the building changing the character of streetscape and contributing to the road traffic.

Table 3. Senopati Street Corridor Physical Character Transformation

Number of Parcels	Physical Character Transformation					
	No Change		Slight Change		Major Change	
	Unit	(%)	Unit	(%)	Unit	(%)
50	0	0	19	38	31	62

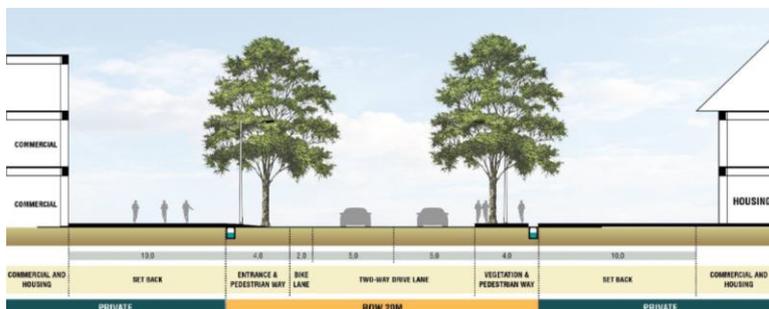


Figure 3. Existing Corridor Section of Senopati Street Corridor

3.3.2. Progo Street Corridor, Bandung

Although for the past decade Progo corridor had experienced a tremendous functional transformation, where residential building along the historic corridor had slowly changed to cater the demand of commercial activities, several building formerly used as places to live was able to maintain its original function. However, not little have undergone a functional transformation, altering into coffee shops, restaurants. These functional transformation followed by land commodification has often impacted the character of the area regarding environment

and building. Residential spaces which were programmed to cater to the need of residential activities inevitably adjusted to the need for commercial operations. Further on, the functional transformation affects the spatial program which then reflects through the environmental and building character found on several residential parcels. Residential heritage parcels which consist of detached housing and large setbacks which function as private lawns and garden then shifts into commercialized parking space to fulfill the needs of commercial activity.

Table 4. Senopati Street Corridor Physical Character Transformation

Number of Parcels	Physical Character Transformation					
	No Change		Slight Change		Major Change	
	Unit	(%)	Unit	(%)	Unit	(%)
39	9	23	14	36	16	41

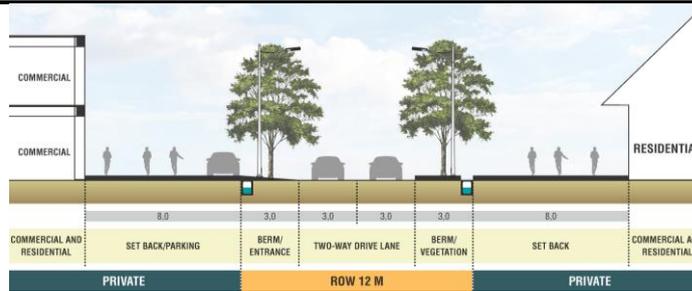


Figure 4. Existing Corridor Section of Progo Street Corridor

3.4. Spatial Planning Regulation and Existing Spatial Context Analysis

3.4.1. Senopati Street Corridor, Jakarta

In the spatial planning regulation (RTRW) of Jakarta 2030, regarding function, the approach of regulation is more conservative. The regulation has not acknowledged the importance of surrounding environment nor building character elements. The recent governor decree of Kebayoran Baru area (2016) has recognized the importance of land use along the boundary area. Kebayoran Baru development was initially designed with a bold delineation area. Along the Senopati Street Corridor, previous laws only acknowledge areas on the south part of the corridor to apply the conservation laws.



Figure 5. Spatial Land Use Plan policy of Jakarta
 Source: Detailed Spatial Planning (RDTR) of Jakarta 2014-2030

This is ineffective due to the fact that development pressure on the northern side area of the corridor which was not considered as a part of the conservation area affects significantly on the character of the built heritage on the south area of the corridor. This phenomenon affects greatly in determining the scope of the area of conservation. Acknowledging the impact, the recent laws have now included these buffer areas as a part of the conservation area.

3.4.2. Progo Street Corridor, Bandung

In the Spatial Planning (RTRW) of Bandung City 2004-2013, heritage buildings were seen as the main focus character in supporting the conservation effort. The regulation had not acknowledged the environmental aspect. Nevertheless, it encourages land use transformation as long as the building character is maintained, although strictly forbidding vertical building typology to be developed. Detailed Spatial Planning (RDTR) of Bandung City 2015-2035 acknowledges a more detailed approach to conservation complemented by a Technical design guideline document of Bandung Old Town Area, Residential Villa and Non-Villa, Bandung City, 2015 (Panduan Teknis Perancangan Kawasan Kota Lama Bandung). It includes a detailed urban built heritage conservation framework and design guideline that encompasses design elements of building and the surrounding environment. Spatial planning regulations allow land use transformation which implements adaptive reuse as long as it complies with the Technical Design Guideline Document of the built heritage area.

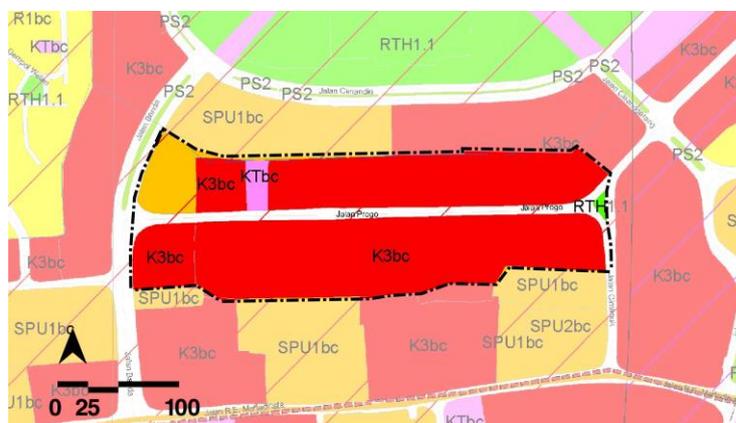


Figure 6. Spatial Land Use Plan policy of Bandung
Source: Detailed Spatial Planning (RDTR) of Bandung City 2015-2035

4. CONCLUSION

The equally significant transformation of land use from residential to commercial areas until 2018 in Senopati and Progo Street Corridor shows that both regions face great economic pressure. Nevertheless, Senopati faces a greater development pressure compared to that in Progo urban built heritage corridor. Higher financial pressure punctuated by the changing condition of the area caused by the increasing level of road function and service of Senopati Street from a desolated local road to an extremely busy collector road indicates an increase of accessibility towards the area further causing the transformation of land use and character of the initial residential development along the corridor. Nevertheless, these changes seemed to have a different impact on the built heritage character in each study area. The development of the commercial regions intended for business and trade around Senopati Street is significantly higher than around Progo Street of Bandung. It is causing greater transformation of built heritage character and loss of distinctive character.

The research shows that development control through spatial land use planning had not been a useful tool to promote conservation of built heritage areas in Senopati street corridor. On the

other hand, a different approach applied in Bandung Spatial planning where viewed to be more successful than that in Senopati Street Corridor regarding maintaining the character of built heritage character. It because due to the existence of a more detailed design guideline which complements the zoning regulation, even though land use changes also occur more or less equally in both study areas.

The character of built heritage is essential in determining the sense of place of an area and the identity of a city. Spatial planning regulation was found ineffective in maintaining the built heritage character if not supported by detailed development control. Building and surrounding environment design guidelines are therefore needed to support the current spatial planning regulation to maintain the built heritage character of a residential neighborhood. Design guidelines for built historic residential neighborhood should take into account significant elements that form the character of the area. To be able to conserve and retain the vital aspect of historic neighborhoods, cultural heritage laws should embrace 'townscape values' which associates not only the individual attributes of a building but also the contribution the area brings to a group of buildings, street or townscape.

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