
ANALYSIS OF URBAN DESIGN DIMENSIONS IN A CULTURAL HERITAGE AREA (CASE STUDY: KOTABARU AREA, YOGYAKARTA CITY)

Hilba Yoga Pratama*, Agung Budi Sardjono**

*) Master of Architecture Student, Faculty of Engineering, Diponegoro University, Indonesia

***) Department of Architecture, Diponegoro University, Indonesia

e-mail: hilbayoga@gmail.com

ABSTRACT

The design concept for the Kotabaru area was designed to resemble the hometown of the Dutch as if the area had become a second hometown for the Dutch who lived in Yogyakarta during the colonial period. Kotabaru was formerly called Nieuwe Wijk, designed with the Garden City concept by a Dutch architect named Thomas Karsteen. The research aims to analyze the dimensions of urban design in the cultural heritage area in Kotabaru Yogyakarta. This area has critical socio-cultural values and is part of a city identity. However, the growth and changes in urbanization have impacted the quality of urban planning. The research method used is descriptive qualitative. Data were collected through field observations, documentation studies, and interviews. The research location is in Kotabaru Yogyakarta, focusing on cultural heritage areas and historic buildings. The analysis includes elements of architecture, spatial planning, land use, regional zoning, and relations with local socio-culture. The research results reveal city design dimensions, including morphological, social, perceptual, visual, functional, and temporal dimensions related to elements in the Kotabaru Yogyakarta cultural heritage area.

Keywords: *Urban Design Dimensions, Cultural Conservation Area, Kotabaru Yogyakarta.*

INTRODUCTION

The Kotabaru area, located in the centre of Yogyakarta city, is included in the administrative scope of the Gondokusuman District, which has an area of approximately 71,305 Ha (Fauzia, 2021). The Kotabaru area during the colonial era was an elite area belonging to the Dutch Government, which was used for living by Dutch people on duty in Yogyakarta. The Kotabaru area was designed by a native Dutch architect named Thomas Karsteen. Regarding planning and design, Kotabaru was built to resemble the hometown of the Dutch, so Kotabaru seemed to be the second hometown of Dutch people living in Indonesia. In the past, Kotabaru, which

was formerly called "Nieuwe Wijk", was designed using the Garden City concept (Kesuma, 2013) so that when crossing the Suroto street corridor, the concept of Garden City feels present because there is vegetation in the form of giant trees that shade the Suroto street corridor as well as being road dividers and road definers. The purpose of the research on the Kotabaru area of Yogyakarta is to find out how the urban design dimensions are contained in the area, which can later become input for the local government to develop the Kotabaru cultural heritage area into a sustainable area. The Kotabaru area is an attractive tourist spot for tourists who enjoy the aesthetic beauty of a cultural heritage area or historic building (Hadiyanta, 2015).

THEORY / RESEARCH METHODS

According to Roger Trancik (1986), urban design is a step to create spaces in the city which aim to create an order that displays the beauty of landscape formations and creates a sense of security and comfort for the people who occupy the area. In the process of designing a humane city, there needs to be a process in the form of studying the potentials and problems in the urban area, analyzing the findings in the field, identifying and then structuring it by taking into account the distinctive patterns in the form of local wisdom found in the area.

According to Krier (1979), an urban area is not only a group of buildings located in an area, but there are other essential elements in the character-building elements of an urban area. According to Shirvani (1985), the physical elements that make up an area are the form of buildings and elements such as green open spaces, pedestrian paths, shape and mass of buildings, land use, supporting activities, and preservation.

1. Urban Design Dimensions

According to Carmona (2003), urban design dimensions consist of social, functional, morphological, temporal, visual, and perceptual dimensions. These dimensions are explained as follows:

- a. The Morphological Dimension discusses the configuration of a space within an urban area. The morphological dimension includes building facades, a street/corridor pattern, and interior spaces.
- b. The Functional Dimension focuses on discussing a building with different functions and on the purpose of designing a building that makes the area more advanced and has long-term potential. Regarding the use of existing spaces in the area, a design has positive and negative impacts on the surrounding environment, activities and activities in the area. Sustainable space goals and functions have to do with functional dimension analysis.
- c. The Visual Dimension focuses on discussing a context in the form of public facilities, regional landscapes, regional roads and corridors, public spaces, and buildings in the area to create an urban visual drama that enhances and strengthens the characteristics and quality of an area. The visual dimension of an urban area does not only come from spatial quality, but texture, colour, and detail also have

an influence. The facade of a building also influences the visuals of an urban area. The relationship between these elements is significant in producing a beautiful visual quality and a sense of place when we pass through this urban area.

- d. The Social Dimension discusses a built environment that will later influence social interactions and patterns of human activity or activity in that area. What must be observed in the social dimension are aspects of security, comfort, safety, understanding of society and the environment it occupies, public space and public life.
- e. The Temporal Dimension discusses a city in its time cycle and history. In urban areas, this temporal dimension is used in different times and histories by looking at things that have changed or are still there and still exist. The temporal dimension is very closely related to the sustainability of urban space through its purpose and use in the future so that the community or urban residents can fulfil their needs.
- f. The Perceptual Dimension focuses on discussing a city based on the community or residents who are users of the area. The perceptual dimension is closely related to "place", which is related to the psychology of a user of the area. The perceptual dimension has influence and understanding, making the identity of a place in the city.

2. Yogyakarta Government Regulation Regarding Cultural Heritage Areas

- a. Areas included in the Cultural Conservation are listed in the Decree of the Governor of the Special Region of Yogyakarta Number 186/KEP/2011, explaining the Determination of Cultural Conservation Areas. There are six such areas: Yogyakarta Palace, Pakualaman, Malioboro, Imogiri, and Kotabaru.
- b. Kotabaru area in Yogyakarta City Regional Regulation Number 6 of 2012 concerns preserving Cultural Heritage. Chapter VI, Regional Specific Cultural Conservation, Article 64, paragraph 3d, decrees that the Kotabaru Cultural Heritage Area must use Indisch and Colonial architecture styles to maintain authenticity.
- c. Regarding Spatial Plans for the City of Yogyakarta, Regional Regulation of the City of Yogyakarta Number 02 of 2010 in Part Four of Determining City Image Paragraph 1 of article 73 paragraph 2 point b, describes the buildings in the Kotabaru area, the area boundaries include DR. Wahidin Street, Sudirman Street, Code River, and the Lempuyangan Railway. According to the Cultural Heritage Law, these boundaries are included in the list of markers, which has meanings regarding the image elements of a city.
- d. Regulation of the Special Region of Yogyakarta Number 6 of 2012 describes the preservation of heritage in the form of buildings included in the criteria for cultural heritage for buildings that must be maintained in the form of their original facades and landscape elements in the cultural heritage area.
- e. Regulation of the Minister of Public Works 41/PRT/M/2007 explains the Technical Criteria for Cultivation Areas in the planning criteria for residential

housing areas. It also explains the general rule of not disturbing the protected functions contained in cultural heritage areas if referring to data from the Tourism and Culture Office that there are settlements and housing designated as cultural heritage buildings. Cultural heritage buildings are not only in residential and housing areas but also in other cultivation areas designated as relics of the past, namely cultural heritage buildings.

Research Methods

This study uses a qualitative descriptive method as the primary approach. According to Sugiyono (2016), this is a research approach that aims to describe in depth and detail an event or phenomenon by paying attention to the characteristics and context of the subject being studied. This research method focuses primarily on interpreting and understanding qualitative data rather than quantitative measurements. Objectives The qualitative descriptive method in this study is to gain an in-depth understanding of the dimensions of urban design in the Cultural Heritage area of Kotabaru Yogyakarta. This approach also aims to explore experiences, perspectives and social and cultural contexts that influence urban design in the Kotabaru area of Yogyakarta.

1. Place and time of research

The research was conducted in the Kotabaru area in Gondokusuman District, Yogyakarta City, Special Region of Yogyakarta. The time for conducting the research is from December 2022 to January 2023.

2. Object of research

The object of this research focuses on the Cultural Heritage area in the Kotabaru area of Yogyakarta, including:

- a. Cultural Heritage Areas, in the analysis of urban design dimensions contained in the area.
- b. Physical space and architecture is an analysis that includes architectural elements, building structures, historical buildings, and physical characteristics of buildings.
- c. Spatial planning, in the form of spatial analysis in the Kotabaru Cultural Heritage area. This covers mapping the area's zoning, land use, and patterns of area arrangement.
- d. Social and cultural environment, explaining the assemblage of social interactions, cultural activities, and cultural identity in the area.
- e. Open space, outlining the use of open space in the Kotabaru area.

Focusing on some of the research objects above will provide a deeper understanding of the characteristics of sustainable urban design in the preservation of Cultural Heritage areas in Kotabaru.

3. Classification of Research Data

This study's data collection method uses primary and secondary data to obtain relevant information. The following describes the data collection method used:

- a. Secondary Data

This secondary data is obtained indirectly, such as historical photographs showing the development of the Kotabaru area of Yogyakarta and the Cultural Heritage buildings in the area. An area map that describes area boundaries, supporting facilities, and regional spatial planning can be used to explain urban design elements and identify the relationship between the environment formed and the local socio-culture. Satellite maps show the morphology and geography of the Kotabaru area while supporting data are also obtained in the form of documentation in the form of photos so that it can be used to support the analysis of urban design dimensions.

b. Primary Data

Primary data is data obtained directly from sources. Observations focused on research objects in the form of physical conditions and characteristics of the Kotabaru area, converting architectural elements, regional spatial planning, and historic buildings. For interviews, data were obtained from residents and government officials. The data obtained from the interviews can be used to explain related cultural values, local history, and subsequent urban design and planning related to the condition of the Cultural Heritage area and buildings in the Kotabaru of Yogyakarta.

RESULTS AND DISCUSSION



Figure 1. Site plan about the Kota Baru area in 1925
Source: Jogjakarta en Omstreken, Topografische Dienst, 1925.

The Kotabaru area of Yogyakarta is a residential area used by the Dutch who lived in the central urban area of Yogyakarta. In the past, Dutch community settlements in Yogyakarta were only around Loji Kecil (Vredeburg Fort), but with increasing economic activity due to the development of sugar cane plantations and sugar factories (Ikaputra, 2017). Resident Cornelis Cane was forced to create a settlement that could accommodate the Dutch community in Yogyakarta, especially around Loji Kecil (Fort Vredeburg), to expand the residential area of the Dutch community towards the north (Aguswin, 2021). The area is called Kotabaru or Nieuwe Wijk (New Town); this area was previously empty land belonging to Sultan Hamengku Bawono VII. At that time, The Yogyakarta resident, Cornelis Cane, asked Sultan Hamengku

Bawono VII for permission to build a settlement for the Dutch people to settle. Regulations regarding permits for constructing the Kotabaru area (Nieuwe Wijk) north of the Code River are regulated in Rijktsblad van Sultanaat Djogjakarta No. 12, 1917. The construction of the Kotabaru area (Nieuwe Wijk) began in 1920 by a special committee formed by the Dutch colonial government and Sultan Hamengku Bawono VII (Wibisono, 2014). The leased land has undulating topography and is full of bushes. The choice of land made by the Dutch colonial government was very strategic because it was to the east of the Code River, and to the south, there were train stations, namely Lempuyangan Station and Tugu Station, which helped with land transportation towards Solo and Semarang, the choice of location of this area was very suitable. Related to transportation needs and meeting the water needs of Dutch people living in the Kotabaru area (Yuliana, 2013). At the time of its design, this area was built separately from the Old City of Yogyakarta, namely the Kraton Yogyakarta area. The Kotabaru area is included in the Cultural Heritage of Yogyakarta, including the Kotabaru area and Dutch heritage buildings. The Dutch used the Kotabaru area to build settlements and supporting facilities in housing, offices, warehouses, barracks, stadiums and train stations (Surjomihardjo, 2008).

Urban Design Dimensions

1. Morphological Dimensions



Figure 2. Map of regional zoning divisions in Kotabaru at this time
Source: Center for Urban Design & Diffability (CUDD), 2014.

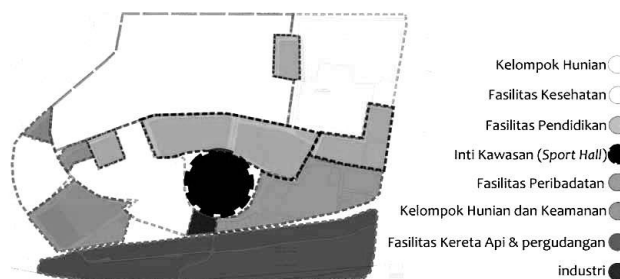


Figure 3. Map of regional zoning divisions in Kotabaru in 1925
Source: Yunita Kesuma, 2012.

The Kotabaru area of Yogyakarta is basically formed from residential areas, and there are supporting facilities with the shape and facade of the buildings having not changed since the beginning of development. Changes in the function of buildings in the Kotabaru area in the residential zone are in the form of residential functions, which have changed functions to commercial buildings and commercial services. The division of zones in the Kotabaru area is not based on a land function, so the placement of commercial building functions tends to be near residential zones in the western part of the area. However, residential zones in the area facilitate convenience in reaching supporting facilities and public facilities whose purpose is to create comfort for residents of Kotabaru Yogyakarta in the past until now.

2. Social Dimensions



Figure 4. Supporting Facilities for Social Interaction Activities

Source: personal documentation, 2023.

Business, education, offices, and trade activities exist on the social dimension. In trading activities, businesses and offices are in the central part of the area, located on Suroto Street, adjacent to the Kridosono Stadium. There are also trading activities in the form of street vendors selling in the area of I Dewa Nyoman Oka Street and on Ungaran Street, creating interactions between visitors to the area, whether residents or tourists on a culinary tour. These interaction spaces appear in supporting facilities in the Kotabaru area, such as pedestrian paths, and in thematic parks in street medians that function as vehicle lane barriers.

3. Perceptual Dimensions



Figure 5. Condition of Cultural Conservation Building in the Kotabaru Area
Source: personal documentation, 2023.

In the Kotabaru area, there is a perception that this area is a cultural heritage area, in which Dutch heritage buildings are still maintained today. The heritage of these buildings revives the economy of residents who sell in the Kotabaru area. There is a need for area development, which includes improving public facilities to support the area so that tourists will flock to enjoy the beauty of the area and its buildings so that the wider public's perception of the Kotabaru area as a Cultural Heritage area will get stronger.

4. Visual Dimensions



Figure 6. Building Visuals in the Corridor in the Kotabaru Area
Source: Googlemaps.com, 2023.

In the Kotabaru area, there is a difference in visual quality between the different street corridors. On Suroto Street, there are new buildings with more modern facades because of the buildings that used to be badly damaged and the sale of buildings without prioritising historical value. The buildings have changed function, and the facade has been changed to a more modern one, such as for hotels and offices along this street corridor, so that the façade is in stark contrast to the surrounding buildings, which maintain their Indische architectural form, with its original façade still intact. On Supadi Street and Sajino Street, the visual quality of the street corridor is still thick with houses with an Indische architectural style and the authenticity of the facades is

still maintained. So, the facade of one building seems still in sync with that of another building.

5. Functional Dimensions

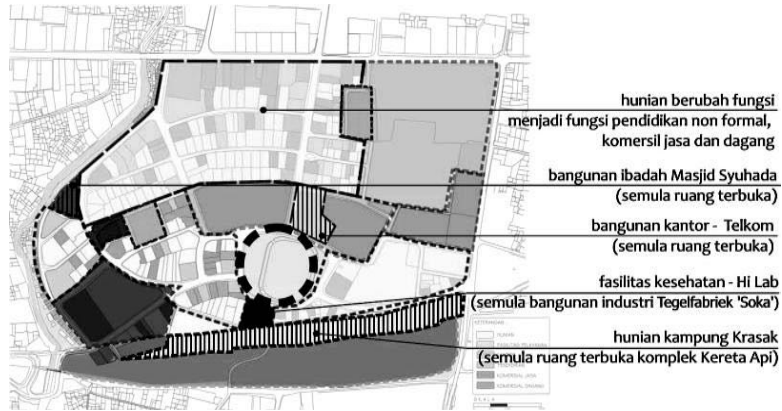


Figure 7. Map of Land Use Zoning Pattern in the Kotabaru Area
Source: Yunita Kesuma, 2012.

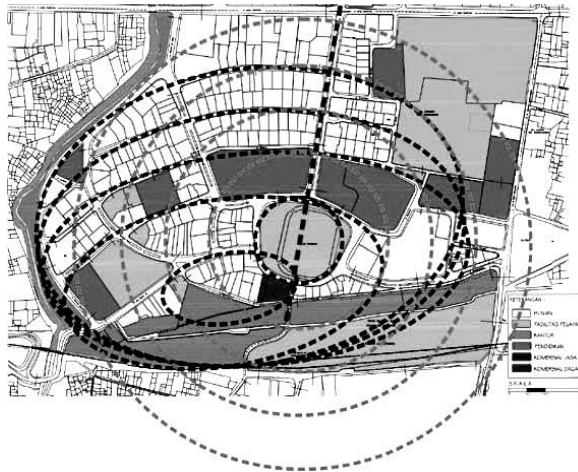


Figure 8. Map of Land Functions in the Kotabaru Area
Source: Yunita Kesuma, 2012.

The Kotabaru area of Yogyakarta has a division of land functional zones, as seen in the site plan. The land function zone used for residential areas in the northern part is a vast residential zone because, previously, it was a place for Dutch people to live when they were assigned to work in the colonial government area in Yogyakarta. For area facilities located in the eastern part, there are also supporting facilities located in the central part of the area, which is in the middle of the site plan. Several facilities are also located in the southern part of the Kotabaru area. Educational facilities are located in the centre of the Kotabaru area in the form of school buildings, namely

Yogyakarta 5 Middle School, Yogyakarta 3 High School, and in the eastern part of the Kotabaru area. For security facilities, there is the Gondokusuman Police, which is in the central part of the area adjacent to the Kridosono Stadium. A health facility in the eastern part is located in the form of the Dr. Sutarto Hospital building. Worship facilities are located in the western part adjacent to the settlement zone, in the form of the Catholic Church of Saint Anthony of Padua Kotabaru, HKBP Yogyakarta, and the Syuhada mosque Kotabaru.

6. Temporal Dimension



Figure 9. Map of Land Functions in the Kotabaru area in 1925
Source: personal analysis, 2023.



Figure 10. Map of Land Functions in the Kotabaru area in 2023
Source: personal analysis, 2023.

In the temporal dimension, the Kotabaru area was once a place for Dutch people who worked in the Yogyakarta government area. In contrast, now it functions as a place for residents to live. The function of the building may transform, but that does not change the facade of the building itself. The Kotabaru area expands the city by creating a "New City Within The City". Supporting facilities such as green open spaces, pedestrian paths, street networks, and sports facilities such as the Kridosono Stadium were built to facilitate the provision of infrastructure. The concept of urban design in the Kotabaru area in the past was by implementing the principles of the

Garden City concept, thus making Kotabaru a first-generation city that applied urban design principles in Indonesia.

CONCLUSIONS

In the temporal dimension, the Kotabaru area still maintains the architectural form of the area with local socio-culture intact. However, many Indisch-style buildings have been converted into cafes, places of education, offices, health services, and businesses to stimulate economic growth in the area. On the social dimension in the Kotabaru area, there are trading, business and office activities in the central area, located on Suroto Street, close to the Kridosono Stadium. There are also trading activities in the form of street vendors selling in the area of I Dewa Nyoman Oka Street and Ungaran Street. This activity creates interaction between area visitors, both residents and tourists who are on a culinary tour in the area. In the visual dimension of the Kotabaru area, there is a difference in visual quality between the street corridor. It can be seen that there are new buildings with more modern building facades. There are hotels and offices whose facades starkly contrast the surrounding cultural heritage buildings. The perceptual dimension in the Kotabaru area highlights that this area is a cultural heritage area in which Dutch heritage buildings are still preserved today, built by the Netherlands. On the functional dimensions and morphological dimensions of the use of building functions, they still use the original building facade and only change the interior elements to attract visiting tourists. The existence of cultural heritage buildings in the Kotabaru area leads to the aim for it to become a historical tourism city to increase regional income from the tourism and cultural sectors so that the area becomes a legacy for the next generation of historical areas. Apparent utilization, development and boundaries are needed to protect the Kotabaru Yogyakarta Cultural Heritage area. This is so as not to cause conflict between the development of the area or the conversion of buildings and the conservation and preservation of cultural heritage according to the rules or regulations that apply in the City of Yogyakarta.

Suggestions that can be given through this research are as follows:

1. Suggestions that can be given through this research are as follows:
2. The research results can be input for the Special Region of Yogyakarta Government in carrying out a program to preserve and maintain the Kotabaru cultural heritage area, maintaining the historical values contained in the buildings and public facilities in the area.
3. There is a need for supervision from the Special Region of Yogyakarta Government regarding development in the Kotabaru cultural heritage area because every year, there is an increase in the area of built-up land. This is not in accordance with the initial goal of building the Kotabaru area which carries the garden city concept, with lots of green open space in the Kotabaru area. The increase in built-up land has an impact on reducing green open space, so the Kotabaru cultural heritage area as an area that carries the Garden City concept will disappear.
4. There is a need for supervision of street vendors who sell in the Kotabaru cultural heritage area who use public facility land, including pedestrian paths, parks, street medians and street corridors, by considering the interests of preserving cultural heritage in the area and also paying attention to aspects of security and comfort, cleanliness, and visual aesthetics. This facility is a selling place in the form of a

food court that is adequate and comfortable for sellers and buyers in their activities so that the visual aesthetics of the Kotabaru area as a cultural heritage area are still well maintained.

5. This research also provides insight into the community, especially building owners who are classified as cultural heritage buildings, so that they can maintain the facade of the building with an Indische architectural style, even though it has now changed its function as a residence, office or commercial building. They are maintaining public facilities classified as cultural heritage so that they do not change their function to commercial land or buildings, as well as maintaining and preserving green open spaces in the Kotabaru cultural heritage area so that future generations can use them.
6. Holding cross-sectoral collaborations with academia, government, and community organizations will encourage the preservation of cultural heritage buildings/areas. These activities can be project financing, joint research, and sustainable policy development in the Kotabaru area so that historical heritage remains sustainable.
7. The results of this study can be used as a reference or study for subsequent researchers.

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