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# Redesign of Danggung Park as Sleman Urban Park based on Local Wisdom in Yogyakarta

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**Abstract.** Sleman Regency is one of the administrative area in Special Region of Yogyakarta Province which has increased the pace of infrastructure development activities that undertaken by the central government affects another surrounding area. The pace of infrastructure development impacts such problems in Sleman Regency such as, increasingly limited public spaces and changes in understanding the value of local wisdom. Sleman Regency has a park located in central government which is Danggung Park. This park has low visitors and less of aesthetic value which require re-design to improve the quality as public space for cultural identity space. The base concept of Urban Park adopted the philosophy that connects to four components in Javanese mythology. The four components in Javanese mythology symbolize the journey of human life in the Javanese cosmological theory, there are Mount Merapi, Keraton, Krapyak Stage, and South seas. The design concept inspired from pattern of Yogyakarta traditional clothing namely, Batik Kawung which describe of Philosophy “Four of Brotherhood and Five of Central itself” by means synergize four items creating world nature and human as life catalyzer. This study uses descriptive and spatial analysis method. The result of this research is expected to be a design recommendation for Sleman Regency governance in the urban park development.

## 1. Introduction

Sleman regency is one of the administrative area in the Special Region of Yogyakarta province. Sleman has an area of approximately 57.482 hectares with the central government in the Sleman district. Sleman district is the center of economic, social and cultural of Sleman Regency that marked by the development of city infrastructure. City infrastructure development can't be separated from modernization and influence lifestyle of surrounding people in Sleman Regency.

The pace of infrastructure development in Sleman regency characterized by increase of modern shopping center, settlement area, and industrial area in the suburban land. It is impacting to the city space planning, and environmental aspect in Sleman Regency which has been embraced the traditional development philosophy that called “Hamemayu Hayuning Bawono”. This concept means that human should to preserve the environment of the universe created by God.



The impact of infrastructure development for city space planning are reduced public space. Therefore, the Sleman Regency government create a space planning strategy program as an effort to improve the quality and reconstructing of public spaces, especially downtown of Sleman Regency. Furthermore, the behavior of local people that increasingly modern causes the reduced understanding people of the local wisdom values which has been privileges character of Yogyakarta. The one of the public spaces in Sleman Regency that being a part of the Sleman Regency government program is Deggung Park.

Deggung Park is the urban park located in the central government area of Sleman Regency which bordered by national road access. However, the physical condition of this park has low value in aesthetics as the face of Sleman Regency urban park. Therefore, the result of this research expected to be a design recommendation to the Sleman Regency.

## 2. Objectives

- ☐ Identify and analyze the potential and the constraints for redesign the Deggung Park based on local wisdom
- ☐ Determine the basic concept, design concept and development concept to redesign of Deggung Park.

## 3. Methodology

This research was conducted in Deggung Park, in Sleman district, Sleman Regency, Yogyakarta Province. This research began in January 2016 until October 2016.

### 3.1. Research Method

- ☐ Commissioning
- ☐ Inventory
- ☐ Analysis
- ☐ Synthesis
- ☐ Concept (for Planning and Design)
- ☐ Construction and Operation

## 4. Results

### 4.1. General Condition

Deggung Park is an urban park located in central government area of Sleman Regency which used by local people for recreational area and venue for incidental events such as national independence ceremony, cultural performances, art and sport festivals. This Park bordered by traditional market on the northern side, KRT Pringgodingrat street on the southern side, Magelang highway street on the western side, and government offices area on the eastern side. Deggung Park is managed by landscape division in environmental agencies of Sleman Regency.

### 4.2. Analysis and Synthesis

#### 4.2.1. Accessibility and Circulation

Deggung Park located nearby to national road access which is Magelang highway street. There are two types of circulation at the park, Primary circulation and Secondary Circulation. Primary circulation intended for pedestrians people, then Secondary circulation intended for vehicles.

#### 4.2.2. Topography

Deggung Park has a flat topography with a slope about 0-2 %. The flat topography can be a potential to developed a variety of activities and addition of landscape elements to attract the visitors/user.

#### 4.2.3. Vegetation and Animals

The existing vegetation types that found in Deggung Park are dominated by tree species such as, *Pterocarpus indicus*, *Ficus benjamina*, and *Roystonea regia*. The big trees species have a potential as a shade in the daytime.

#### 4.2.4. Visual

There are some potential good view in Denggung Park, in the southern side of the park there is an elephant sculpture as a focal point on the Denggung Park. Furthermore, also in the southern side there is signage of Denggung Park and electronic video (videotron) that looks glorious.

#### 4.2.5. Facilities

The facilities that already available at the Denggung Park such as, bench, trash bin and toilet. However, the condition has not proper to accommodate the visitors. In addition, the visitors want to restructuring and relocation to the street traders who build up semi-permanent stall.

#### 4.2.6. Users

Denggung Park fairly crowded in the afternoon by people, especially children and adolescents. When a specific event, the intensity of visits increase compared with the weekdays. Denggung Park used as a venue for events such as national independence ceremony, cultural exhibition and art festival.

#### 4.2.7. Local Wisdom Values

Based on the research, the potential value of local wisdom philosophy that developed in the park is space planning aspect refers to Javanese local wisdom philosophy adapted from Yogyakarta kingdom which is “Keraton”. Furthermore, traditional architecture that applied through the traditional construction, local plants, traditional rituals and arts.

### 4.3. Concept

#### 4.3.1 Basic Concept

The concept that will be applied to Denggung Park is the historical axis of Yogyakarta, which is the implementation of traditional development philosophy called “*Hamemayu Hayuning Bawono*”. The historical axis of Yogyakarta is connecting the four components include, Mount Merapi, Keraton Yogyakarta, Krapyak Stage, and South Seas. This concept symbolizes the cycle of human life that starts from born to the world and live a life as a child, then entered a transition period that called adolescence. Then after going through this period, human will enters the adulthood and the old ages period before returning to God.

#### 4.3.2 Design Concept

The design concept adopted a motif of Yogyakarta traditional clothing, called *Batik Kawung*. This motif contains a philosophy “Four brotherhood and five of central itself” that means a harmony between four elements of the universe and human as a symbol of earthly life. Batik Kawung contains two geometrical pattern, circle and square. The circle pattern on the motif is adopted as a planting pattern. The square pattern adopted as a space and hardscape patterns.

### 4.4. Development Concept

#### 4.4.1 Space Concept

The space concept of redesign Denggung Park implementing the cycle of human life philosophy. It is categorized according to age levels including, children, adolescents, adults and elderly. According to cycle of human life philosophy generated four classifications area including, welcome area, actualization area, service area and contemplation area.

#### 4.4.2 Circulation Concept

Circulation type that used on the research site is controlled form. The controlled form has characteristics strict and formal. (Booth 1983). Therefore, this type is suitable to be applied as a circulation form pattern. Circulation development concept of

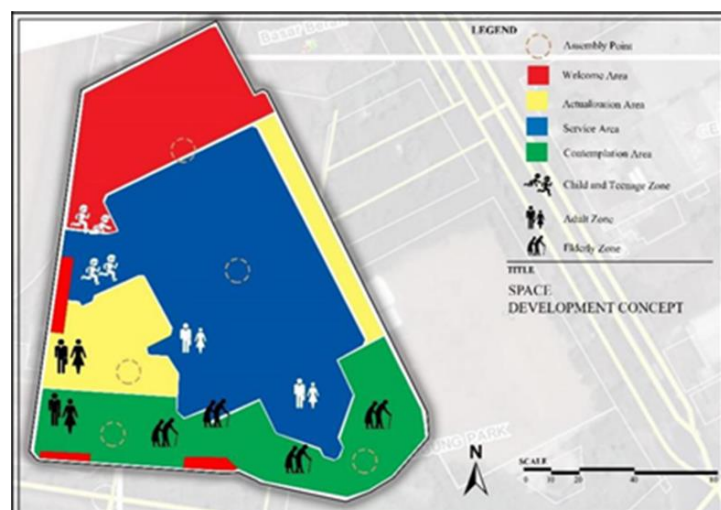


Figure 1. Space Concept

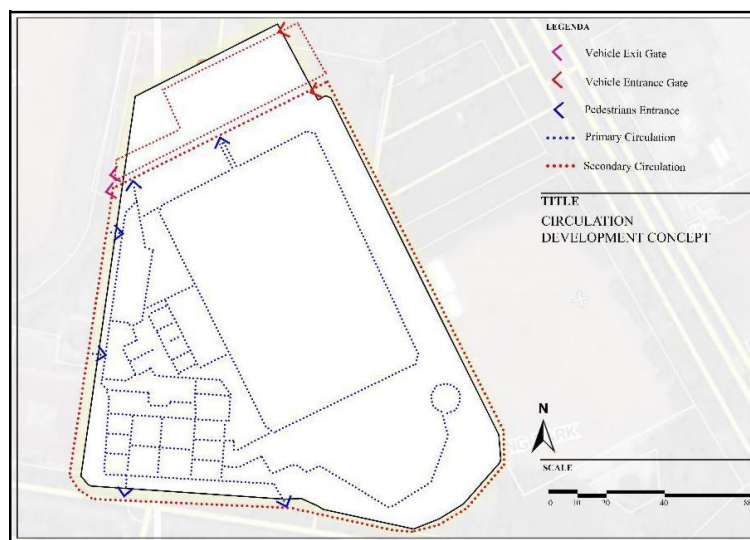
Denggung Park categorized into two types, primary circulation and secondary circulation. The primary circulation is the main circulating inside the park that reserved for pedestrians. Secondary circulation reserved for vehicles outside of the park.

#### 4.4.3 Vegetation Concept

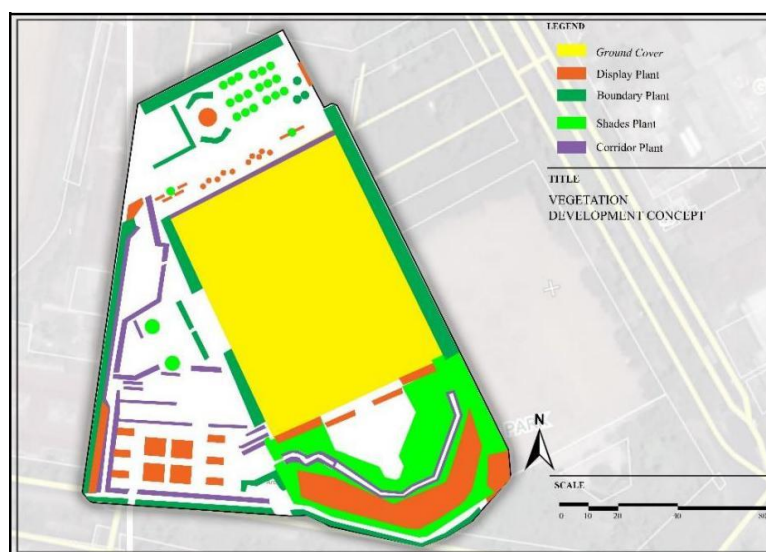
Vegetation development concept of Denggung Park is categorized into five classification functions, ground cover, shades, boundary, corridors and display. The development concept using a composition and the traditional philosophy of the local species plants.

#### 4.5. Development Design

Development design generates an overall plan, called site plan. Welcome area is located in the northern side of the park which designed more attractive as a place to receive the visitors and become the entrance gate.



**Figure 2.** Circulation Concept



**Figure 3.** Vegetation Concept





**Figure 4.** Site Plan

Furthermore, Actualization area also located in the northern side of the park that intended to accommodate the teen community. The main facilities in this area include, main field, outdoor gym, stage for arts and cultural performance, mini skate park, and jogging track surrounding the main field. The third is service area in the southern side that reserved for adult visitors. The main facilities include, a mosque, wireless fidelity (*Wi-fi*) zone, and trades stall centre. The fourth is contemplation area in the southern side. It is reserved to elderly and disable people. The facilities in this area bring a relaxing atmosphere for the visitors. Reflexology path in this area provided for medical therapy, then Plaza and Water Feature that presents the water attractions to improve the visual character in this area.

## 5. Conclusion

Denggung Park is an urban park that located in the Sleman Regency government centre and bordered by national access road. Based on analysis and synthesis, Denggung Park has a potential to be developed. The basic concept that adopted from historical axis of Yogyakarta which is the implementation of traditional development philosophy, Hamemayu Hayuning Bawono

Historical axis of Yogyakarta connecting the four components from the north side to south side there is, Mount Merapi, Keraton Yogyakarta, Krapyak Stage, and South Seas. This concept also represent the cycle of human life from childhood, adolescence, adulthood and elderly. The design concept inspired from pattern of Yogyakarta traditional clothing namely, Batik kawung which describe of Philosophy “Sedulur Papat Limo Pancer” that means four of brotherhood and five of central itself. Local wisdom symbolized by spatial plan aspect, traditional architecture, vegetation and traditional rituals. This research is expected to be a design recommendation for Sleman Regency government in the urban park development program.

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