

The Provision of Residential Park as a Green Open Space to Accommodate the Children's Activity (Case Study: Bentiring Permai II Residence, Bengkulu City)

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ABSTRACT

The residential playpark is very important, as it is the best alternative place for children to move freely, get to know the environment and socialize. But in reality, there are still many residences that are not equipped with a proper park facility or have no a park at all. One of them is Bentiring Permai II Residence. Based on these problems, this research is conducted to find out how important the existence of playparks and the minimum park design and facilities for children's activities according to their age. This research type is a qualitative descriptive. The result will be a direction for the park layout to suit the residential area conditions and provide the activities for all ages of children.

INTRODUCTION

The residential complexes are the preferred place to live, especially for young couples. There are several reasons, such as the size of the house being suitable for a small family and the price of the house on offer being more affordable especially subsidized housing. As many young couples choose to live in the Residential, it is easy to find residents with young children in the new residential. One of them is Bentiring Permai II Residence, in Bengkulu City. As with other new residential, the residents of Bentiring Permai II are mostly young couples with young children.

Childhood is closely associated with play. Therefore, in Bentiring Permai II, many small children can be found playing with their friends, accompanied by their parents. Playing outside the house is the second alternative because the yard and the space inside the house are very limited. Children should have enough room to play. Large spaces allow children to move freely and open spaces can accommodate it. Children who play in open spaces are more likely to explore and get to know their environment and other people through communication and interaction. Of course, in order to maximize children's development, open spaces need to be equipped with facilities that support play activities.

The Residential Developers usually provide the area for public facilities that can be used as playpark. In reality, a significant portion of the area is either unused or employed as a makeshift playpark. Even though their existence is very important for the development of children. For this reason, it is necessary to study the minimum standards of playparks for children living in residential with limited area and distant access to the city parks.

LITERATURE REVIEW

Definition of Green Open Space (GOS)

Green Open Space is an elongated area/path and or group, its use is more open, where plants grow, both naturally and deliberately planted (Permen PU N0.5, 2008). Green Open Space can also be defined as an area or urban space that is not built and its surface is filled with plants that function to protect habitats, environmental facilities, secure infrastructure networks, agricultural resources, atmospheric quality, and support water and soil sustainability (Hakim, 2012). Based on the regulation of the Domestic Affairs Ministry No.1 2007, what is meant by Urban green open space is part of the open space of an urban area filled with plants and plants to support ecological, social, cultural, economic, and aesthetic benefits.

Residential Park

A park is defined as an area enclosed by a fence and used for the purpose of pleasure, enjoyment, and comfort (Laurie, 1986). Park as a form of green open space in urban areas can be categorized based on the provision location, namely buildings, settlements, and cities. Parks in residential locations are divided into several types (Permen PU No.05, 2008), including:

1. Neighborhood parks GOS, which is a park intended to serve the residents in the neighborhood scope, in particular, to serve social activities.

2. Hamlet parks GOS, designed to serve the residents of a hamlet, especially youth activities, community sports activities, and other community activities.
3. Urban Village GOS, which is a park located within an urban village area and designed specifically to serve the residents of that village.
4. Sub-district GOS, which is a park intended to serve the population of a sub-district and is located within the relevant sub-district area.

The residential park is a type of green open space located in urban residential areas. The definition of a residential park is a public open space that is located in residential areas or settlements, that serve the people of a limited administrative area or environment, such as the Neighborhood or the Hamlet (Permendagri no. 1, 2007). Within the scope of the neighborhood administrative area, residential parks are directed to have a minimum area of 1 m² per resident, with a minimum total area of 250 m² (Permen PU No. 5, 2008).

The residential park, as well as the other green open spaces, can be an 'essential third space' for activities outside the house and the workplace. Park can be a public space for interaction between people of different ethnic and cultural backgrounds, parents, and children, a place for play and exercise, and also for self-expression and creativity (Hasibuan, & Syahadat, 2020).

Children And Play Activity

Childhood is always closely connected with the activities of play. It can be said that all the play activities of children have the same value as the learning and work of adults. Play can be interpreted as a form of activity carried out by children for pleasure, excitement, and happiness. It is good for the development of cognitive and motor nerves and can increase the stimulation rate of children's development, thus increasing children's intelligence (Andayani, 2021).

Children's development can be categorized into three aspects, namely physical, intellectual, and also personal and social development (Papilia & Olds, 1993). Physical development is shown by the changes in physical and motoric skills. Intellectual development is shown by changes in the mindset, while personality and social development are shown by the ability to communicate, express ideas and emotions, and respect friends. All of these improvements can be achieved by children through play activities, either on their own or with their parents or other children.

In general, children's play activities can be divided into two types, active play and passive play (Hurlock, 1987). Active play can be demonstrated by play activities that involve the children's physical activity by doing the movements, such as jumping, running, moving up and down, and so on. Passive play, on the other hand, is a play that does not involve physical activity but is merely entertainment, for example watching television, playing video games, and watching other children play.

According to the age group of the children, the play activities can be classified into three stages (Gallahue, 1982), which are:

1. Exploratory stage in the 0 – 2 years age range. At this stage, the children are learning to recognize the objects around them and do not yet have perfect control of their bodies.
2. Mastery stage in the 2 – 7 years age range. At this stage, playing with toys becomes important as the children have begun to control their bodies.
3. Achievement stage for children aged 7 and over. At this stage, they are capable of controlling their bodies effectively. Play activities can be directed towards collaborative and rule-based activities, such as group sports.

Children need a sufficient space to play. In addition to inside the house, children need a wider space to explore, and parks are one of the play spaces in open areas that children can use to do play activities together. Based on their activities, parks consist of active recreation parks and passive recreation parks (Wibowo, 2016).

An active recreation park is a park where users can engage in activities by actively using the park facilities for fun, freshness, and well-being. The facilities that can be found in an active recreation park are sports facilities, playgrounds, hiking trails, fishing, and others. In contrast, a passive recreational park is a park designed only to enjoy its beauty but not to hold any activities. Examples of passive recreational parks are forests, greenways, reservoirs, etc.

To create a good and suitable children's playground, there are two important aspects that need to be considered, namely safety and comfort (Alamo, 2002). The safety aspect aims to give the children a sense of security when accessing the various facilities in the park. The comfort aspect aims to provide a sense of comfort for children while they are doing activities in the park. In addition, there is also an aspect of convenience, consisting of the convenience of performance, parental supervision, and the convenience for children during park activities, including for children with disabilities.

According to Shackell, et. Al (2008), a good play space for children should meet at least 10 criteria:

- 'Bespoke'
- Well located
- Make use of natural elements
- Provide a wide range of play experiences
- Accessible to both disabled and non-disabled children
- Meet community needs
- Allow children of different ages to play together
- Build in opportunities to experience risk and challenge
- Sustainable and appropriately maintained
- Allow for change and evolution.

The specification standard for the residential area's playpark is shown in the following table:

Table 1. The specification standard for the residential area's playpark

Aspect	Criteria	Standard	Source
Convenience	The convenience of location achievement	< 500 m	Panduan Rancang Taman Lingkungan, 2018
	Disability-friendly	<ul style="list-style-type: none"> • Land Slope <5% • Equipped with ramp lanes 	SNI 03-6968-2003
Comfortable	Adequacy of area	<ul style="list-style-type: none"> • Min. 250m² 	<ul style="list-style-type: none"> • Permen PU 5 Tahun 2008
	Comfort-supporting Facilities <ul style="list-style-type: none"> • Dominated by natural materials • 20% of the total area for pavement and Surveillance area • Playground boundary elements are 5% of the total area 	<ul style="list-style-type: none"> • Minimum width of Pedestrian path: 70cm • Minimum 1 sport area is available • Garden bench without corner, with the size of height 40-50cm and size of seat width 40-50cm. • signage showing the park name, description, etc. • pergola/ gazebo, at least for 3-4 people orang • <i>children's playground</i>, at least 2 types of areas for younger and older children • Garbage can, at least consisting of organic and inorganic • Vegetation, in the form of shade trees, shrubs, and grasses 	<ul style="list-style-type: none"> • Panduan Praktis Elemen <i>Hardscape</i> pada Taman Lingkungan, 2020 • Komponen Perancangan Arsitektur Lansekap, 2012 • SNI 03-6968-2003
Security	Security-supporting facilities	<ul style="list-style-type: none"> • Lighting • Sport area's barrier • Hedge 	Panduan Praktis Elemen <i>Hardscape</i> pada Taman Lingkungan, 2020

Source: Literatures

METHODOLOGY

This research is a descriptive qualitative study with a focus on the provision of playpark to accommodate children's play activities. The object of this research is Bentiring Permai II Residence. The data collection consists of primary and secondary data. The primary data is obtained through surveys and

interviews with the people of the residential to find out the location that can be used as a playpark and to find out the importance of having a playpark in that residential. The secondary data is obtained through literature studies related to the design standards of children's playpark. Furthermore, these data are analyzed to provide the playpark design guidelines that are appropriate to the area conditions and the age of the children in the residence.

RESEARCH RESULT & DISCUSSION

The Survey Result of Bentiring Permai II Residence

Bentiring Permai II Residence is one of the residential complexes located in Bengkulu City, specifically at Samsul Bahrun Street, Bentiring Sub-district, Muara Bangkahulu District. This residence has been developed in 2019. Within 5 years, almost all the units have been occupied, with an average of young couples who are newly married and have young children.



Figure 1. Location of Bentiring Permai II Residence

Source: Google Maps, 2024

like most residential complexes, the area for each housing unit is very limited, which means that there is almost no open space in the courtyard. There is a vacant lot on the housing site that could be used as a public facility, but it has not been used so far. When children want to play outside, they tend to use the street with other children. Based on this explanation, there is a need for the existence of a green open space in this residential as a place for children to play.

Table 2. The Resident and Park Visit Data

No.	Component	Information
1.	Number of households	67 households = 219 people
2.	Number of children	89 people
3.	The average age of children	0-12 years old
4.	Number of city parks visits within 1 month	1 - 3 visits
5.	Duration for a single visit	1-2 hours
6.	Reasons for visiting city parks	<ul style="list-style-type: none"> • Encourage children to play, exercise • Recreation with family • Experience a different atmosphere from ordinary life • Have a chat

No.	Component	Information
7.	Problems in visiting the city parks	<ul style="list-style-type: none"> • The location of the park is quite far from home • Have to wait for father's holiday/off work schedule because they need a vehicle to reach the location

Source: Survey and interview data, 2024

According to the interview data, the average resident visits the city park 1 to 3 times a month to bring their children to play and exercise, to relax with the family, to talk, and to feel a new atmosphere to relieve boredom and tiredness. People rarely go to the city park, as it is quite far from their homes. In addition, the park is not possible to be reached by walking. Parents often need to coordinate their schedules to accommodate driving children to the park, adjusting the father's free time accordingly. Therefore, as many families have children under the age of 5, mothers may express concerns about using their vehicles themselves. The location of the nearest park to Bentiring Permai II Residence is shown below.

Table 3. The Residential - Park Distance

No.	Name of Park	Location	Distance(meters)
1.	Muara Bangkahulu Triangle Park	Dharma Wanita Street, Bentiring Permai Sub-istrict	1.219 m
2.	Tanjung Agung Cultural Park	Beringin Street, Tanjung agung Sub-district	3.536 m

Source: Google Maps

The city parks closest to Bentiring Permai II Residence are Muara Bangkahulu Triangle Park and Tanjung Agung Cultural Park. Both of these parks are quite far away, which is between 1 to 3 km from the residential location and must be traveled by vehicle.

The Survey Result of Residential Green Open Space as a Playpark

The green open space that can be used as a children's play area in Bentiring Permai II Residence is a vacant site that functions as a public facility area provided by the developer. This site is located in Block G, which is accessible to all people in the residence. The longest distance that may be driven to the park site is only 290m. The area of public facilities that can be utilized as a playpark is ± 410m². According to the results of the sample interviews with the residents, there is strong support for the public facility being designed as a children's playpark.



Figure 2. Playpark site location
Source: Google Maps & Survey, 2024

A playpark area should have a standard shape, such as a square or rectangle, with proportional length and width (Prakorso, 2018). This is because these shapes are considered the most efficient and easily adaptable to park program needs. In the case study, the existing site is triangular, so the space program has to be designed in such a way to suit the shape of the site.

The direction of GOS Design for Children's Playpark

According to the shape and the area size of the green open space to be designed as a children's playpark in Bentiring Permai II Residence, the following are design recommendations:

1. The Site Design

a. The Site Slope

The site tends to slope, so only a little cut and fill is required. As the ground level on one side is almost the same height as the road surface, the entrance area is located on that side, making it easier for young children to reach.

b. The Accessibility/ Circulation

For circulation, a pedestrian path is designed on the outside of the park, dividing the two play areas for easy access. The pedestrian walkway can be made of a paving stone material that can absorb the rainwater.

c. Vegetation

The vegetation in the park consists of shade trees, shrubs, and grass. Grass is planted on almost the entire surface of the park as a play area and shrubs are planted on the outer side of the park as a fence.

2. The Supporting Facilities

a. Sports Area

Due to the limited area of the park, the type of sport that can be accommodated is a badminton court with standard dimensions of 13.4m in length and 6.10m in width (Prakoso, 2018). This field can also be used to play table tennis and single-ring basketball. For safety reasons, the sports area is located opposite the playground. It is surrounded by a safety wall made of wire mesh.



Figure 3. Multifunctional Sports Area Design Example
Source: Google, accessed 2024

b. Park Bench

The Park bench can be made from a mixture of concrete and composite wood to give a natural and durable look. The bench design can be elongated or circular to allow parents to watch their children from different angles.



Figure 4. Park Benches Design Example
Source: Google, accessed 2024

c. Gazebo

The gazebo is close to the play area, which is mainly used by children under 7. This is to help parents keep an eye on their children during play. The gazebo can be made of wooden material to give a natural look.



Figure 5. Wooden Gazebo Example
Source: Google, accessed 2024

d. Playground

The playground is divided into 2 separate areas for safety reasons, a sand playground and an attractive playground with equipment, such as swings, slides, and seesaws. The sand playground can be used by the younger children, while the attractive playground can be used by the older. The equipment uses attractive materials and colours.



Picture 6. Playgrounds Facilities Example

Source: Google, accessed 2024

e. Signage

Signage can be designed using acrylic, galvanized, stainless steel, or concrete materials that are easy to maintain. Signage can include the name of the park and evacuation signs of assembly points in the event of a natural disaster. The colour of the signage should be in contrast to the surroundings so that it can be easily seen.



Figure 7. Park Signage Example
Source: Google, accessed 2024

f. Lighting

Lighting can be placed in the playground, entrance road, and sports area.



Figure 7. Park Lighting Example
Source: Google, accessed 2024

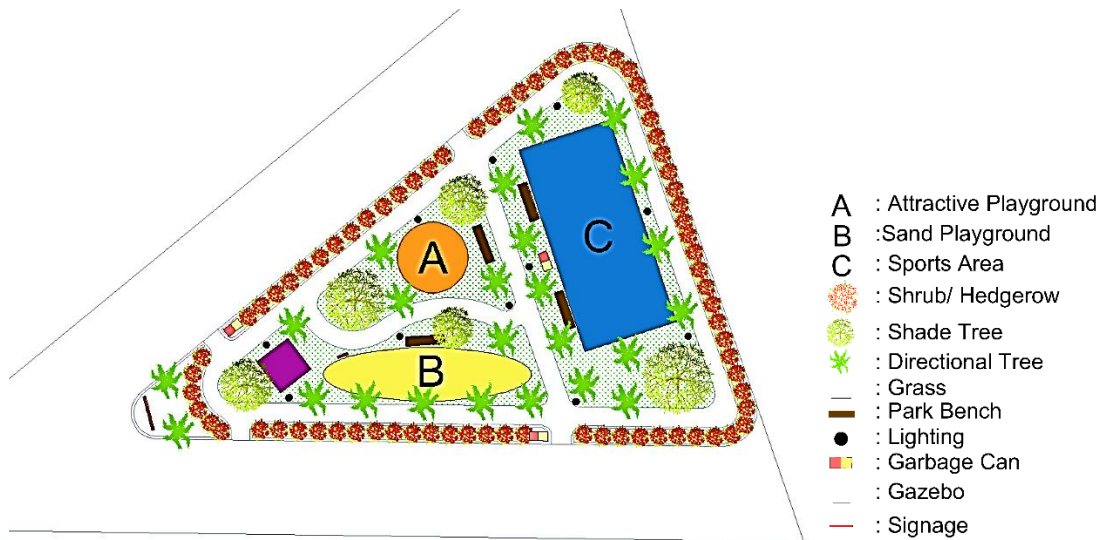
g. Garbage Can

garbage can, consisting of organic and inorganic waste, can be placed at several accessible points around the park.



Picture 8. Example of Garbage Can
Source: Google, accessed 2023

The design illustration of the recommendation is shown below:



CONCLUSIONS AND RECOMMENDATIONS

The Green open spaces as children's playparks have a major influence on children's development, so their existence in a residential environment is very important. The design of children's playpark must fulfill 3 aspects: safety, comfort, and convenience, through location design, materials, and supporting facilities. In terms of location, the playpark must be easily accessible to all residents. For the larger area of residential, more than 1 playpark should be provided.

Every residential may have different site condition and user characteristics. the plan for the park provision, especially the location and shape of the site, must be considered by the Developer from the start. This is to ensure efficient use of space and facilities for children to play. The playpark at The Bentiring Permai II Residence has sufficient space to accommodate standard play facilities for each age group of children. Although the shape of the site does not fulfil the recommended regular shape, it is helped by the sufficient area.

The provision of children's play areas with the facility standards should be implemented in every neighbourhood. Important points in playpark design are the arrangement of play areas for each age group and the type of safe and comfortable play equipment.

ADVANCED RESEARCH

This research is still limited to a small scope, namely the Bentiring Permai II Residential. Each Residential is likely to have different characteristics of location and residents. Therefore, the recommendation for future research on this topic is to standardize the children's playpark in the public facilities area in the Residential in Bengkulu City based on the characteristics of the site and its residents.

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