

THE GREEN PLACE BUILDING FOR LOOKING BIRD AT GUANGZHOU NANSHA BIRD PARK (INFINITE 8)

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Abstract

This research is located in the Nansha Bird Park located in Guangzhou which has an unspoiled wetland landscape. we designed the building with the concept of "Infinite 8", this infinite 8 is a building that has no boundaries like the letter 8 that is unbroken and describes the universe. and also the number "8" on this building symbolizes good luck for most Chinese people. In this design, you will find a pillar that rises to the sky that describes the boundaries of the pole, besides that this building is made of bamboo. The method in this design concept is exploratory, namely by exploring more ideas from various things and philosophies from number 8. This building also adheres to the application of the green building principle with the observation method in the field, responding to wet land, the use of full bamboo is highly recommended for this building. from this study resulted in a design suitable for bird viewing at the Nansha Bird Park in Guangzhou China.

Keyword: Nansha Bird Park, Infnite 8, Green Building, Bamboo, Concept.

PRELIMINARY

Bird ecotourism has become an interesting thing for the public indefinitely. In certain habitat communities, birds are considered as an umbrella for the conservation of various other species of biota (DM 2019) However, the status of bird populations is getting worse due to environmental pressure and increased human activity. Therefore, a conservation strategy for birds that can protect against extinction is needed.

Nan Sha Wetland Park is Guangzhou's largest man-made ecosystem park located at the mouth of the Pearl River at the southern tip. The park has an unspoiled ecological environment surrounded by mangroves with various birds migrating to the area of interest. Nan Sha bird park is known as a bird's paradise. The scenery to be enjoyed is divided into six islands which include Rainforest, Huashu, Palm, Labyrinth, Treasure and Qianhezhou islands. Some of the protected animals live in this park, including pelicans, flamingos and crown cranes. Visitors are free to interact with the birds in close proximity.

Nan Sha Bird Park is located in Guangzhou, covering an area of 250,000 square meters, has 48 species of animals designated nationally as protected animals. This park is also an ecological park that is used for scientific purposes and the breeding of waterfowl. Nan Sha Bird Park has a landscape of naturally occurring wetlands.

In 2014 Nan Sha Bird Park was built three shelter structures as ticket booths, exhibition halls and science rooms. The white cloth used is made of PVDF (Polyvinylidene fluoride) plastic. This shade structure will become waste which takes a very long time to decompose. The tensile structure also creates a covered area of 600 square meters. This is very unfortunate because it can eliminate the original ecosystem.

In this research, the problem that arises is how the concept of planning by applying the principles of Green Building in Nan Sha Bird Park so that it becomes a comfortable, sustainable and sustainable bird park.

LITERATURE REVIEW

Green Building

Green building is one of the sustainable building concepts from the planning stage to construction to renovation or demolition with principles that have a positive impact on the environment. According to (Pradono 2008) sustainable, environmentally friendly and a building with excellent performance is an interpretation of green architecture. In (Siregar 2012) prioritizes energy efficiency as a movement for the preservation of nature and the environment which is often referred to as environmentally friendly architecture. This concept is applied to reduce air pollution in the environment by several developed countries.

A building that adheres to the principles of green building is a building that applies the principles of protection, saving and reducing the use of natural resources. The concept of applying green building principles is to minimize the consumption of natural resources, including energy, water and materials and to minimize negative impacts on the environment (Karyono 2018). This principle is a development planning approach that aims to minimize damage to nature and the environment in which the building is erected. The focus of green building is on environmentally friendly architecture which, among others, minimizes the consumption of natural resources, energy efficiency, wise and sustainable use of water and the use of non-polluting and recyclable materials.

- i. Conserving energy, namely the building must be designed or built by a consideration and minimizing the use of energy or combustion materials (fuel) made of fossil.
- ii. Working with climate, namely the building must be designed solely to work properly and properly with a climate that is sourced from natural energy.
- iii. Respect for site, that is, this building is designed with the minimum possible damage to nature.
- iv. Respect for user, which is to think about the interests of the people who occupy it.
- v. Limiting new resources, namely buildings should be made and designed with as little use of resources as possible and ultimately to be used for other architectural needs
- vi. Holistic, that is, from all of the above must be carried out thoroughly to approach development and the environment

(Vale 2010) criteria in green building are: Buildings are designed to be able to modify the climate and adapt to the environment. This can be done by making the building elongated and thin to maximize lighting, not using artificial heating and cooling, thus saving energy. Buildings are also expected to adapt to the climate and environment. Energy savings lead to operational savings in the building and its surroundings. This requires the design and layout of the building mass that uses energy as a whole. Building orientation will affect comfort and energy consumption. So that the distance and dimensions of the building will affect energy consumption in this case related to transportation. However, the use of wood must also be managed properly. Materials that are reuseable and recycled can be used again.

The use of natural or local building materials is prioritized to save energy due to transportation. Renewable materials such as wood, bamboo are selected materials that are considered sustainable because they can be replanted. Energy saving in buildings can be done on the principle of reducing or reducing the heat gain from solar radiation.

Ecotourism Park

The availability of green land that is optimally developed to become a park that is used to improve environmental quality and ecotourism. (Aditya 2020) states that sustainable use and ecotourism are sustainable uses of bird ecosystems. Sustainable use is the permanent use of bird wildlife by regulating the permanent time and area. Meanwhile, sustainable use in ecotourism is the use for bird watching. According to (Steve R 2014) several developed countries have conducted bird watching ecotourism as a natural tourism industry and as a solution for conservation in sustainable use schemes.

(Hafiz MI 2017) states that a bird park is an artificial ecosystem area, besides being used as a tourist destination, it can also be used for research and education. The bird park design concept is determined based on the activities in the area. Zoning in the design of a bird park is prioritized to divide based on the suitability of the bird's living space after which it will be for other facilities. The shape of the building mass in the bird park is based on the outward view and heading to the location which functions as a barrier to the outside view but can still cover the functions in it.

RESEARCH METHOD

The method in this design concept is exploratory, namely by exploring more ideas from various things and philosophies from number 8. This building also adheres to the application of the green building principle with the observation method in the field, responding to wet land, the use of full bamboo is highly recommended for this building. from this study resulted in a design suitable for bird viewing at the Nansha Bird Park in Guangzhou China.

FINDING AND DISCUSSION

The principle of green building is to minimize the consumption of natural resources and have minimal negative impacts on nature, the environment and humans. states that sustainable architecture or green architecture is related to natural, artificial, energy use, economic, social, cultural and institutional aspects. The use of energy is an emphasis in green architecture.

Infinite 8, is the name of the building. The building made of bamboo material is a building designed as an environmental adaptation as well as a new landmark that architecture students can easily build. The building is inspired by the values and meanings of the number 8 according to the Chinese cultural belief that the number 8 is a number that brings good luck and also describes the pattern of infinity which means infinity. Described very clearly on the roof and benches of the building so it is hoped that the existence of this building can provide continuous and unlimited luck for those who take the time to sit on these benches while enjoying the beauty of Nature in the birdpark area.



Gambar 1. Infinite Concept In Morning and Evening Scene



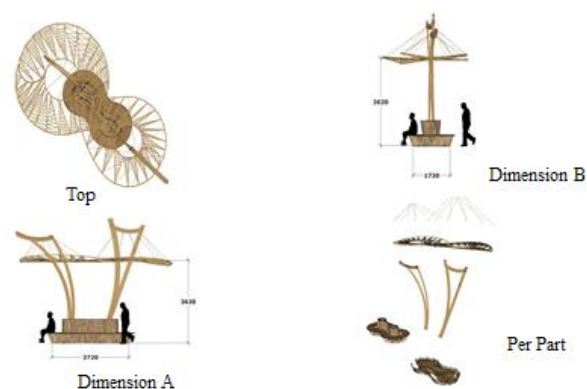
Gambar 2. Infinite Concept Night Scene

The building has several philosophies of life besides bringing good luck. The two pillars as the main support are designed to resemble the shape of a harp which symbolizes the angels as messengers of the Creator. This part of the harp is made straighter and slightly curved which also symbolizes the characteristics of life which are firm towards all kinds of creatures in it but still dynamic. There are two pillars symbolizing life in the world and in the hereafter which both have dynamic stories and paths and are connected to one another through luck / karamah which is depicted as depending on the two pillars. So that our lives as living beings in this world and in the hereafter are closely connected through a means of karamah which originates from the Creator



Gambar 3. Building Concept Infinite 8 Design

The bench also represents the same value and meaning as the pattern and shape of the roof. Functionally, the bench is used as a seat while the birdpark visitors enjoy nature and birdsong there. The overall shape of this building is a building that is designed asymmetrically so that it gives a different nuance to each side and different points of view. The structure of this building can stand upright because the bamboo poles are supported by metal plates which are tied to the landing of the building. Meanwhile, the benches are tied to the posts and borders in order to support the load perfectly. Overall, it is hoped that all parts of the building will provide uninterrupted comfort and luck to its users.



Gambar 4. Building Concept Infinite 8 Design

The constituent material of the infinite 8 building in the bird park in Nan Sha is local material in the form of bamboo which is a typical plant in China.

CONCLUSION

From the results of designing the building concept at the Nan Sha bird park in Guangzhou applying the principles of green building, namely :

- i. Building
- ii. Using local environmentally friendly materials in the form of petung bamboo so that it does not become waste in the future
- iii. In addition, the mining section uses rope made of bamboo fiber so that it does not pollute the environment.

In addition, the Infinite 8 building has also entered into the 6 criteria for green building including:

- i. Save energy because it does not use excess electricity.
- ii. In harmony with the environment because it uses materials from nature
- iii. It fits perfectly with the site.
- iv. Suitable for users here because this building creates a comfortable impression when sitting on a chair in the building
- v. Do not use chemical and industrial additives

And finally it is holistic, that is, all of the above must be carried out thoroughly for the approach to development and the environment

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