

Rehabilitation Center for Drugs Addicts with Biophilic Architectural Approach

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Abstrak

Drug cases in the city of Medan, North Sumatra are very troubling. Based on the Indonesia Drugs Report 2022, Medan is the number 1 city in terms of disclosure of drug cases with a total of 6,077 cases and North Sumatra is ranked 1st in the number of prisoners and detainees of drug cases throughout Indonesia. It can be seen that drug cases in Medan city are very worrying, the factors that cause this can come from anywhere, both from the environment, and increasingly uncontrolled relationships. Patients of this abuse have the potential to harm themselves and others. Therefore, a place is needed to recover the addiction of drug abuse victims.

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1. Introduction

Drugs are a topic that is endlessly discussed around the world. In our country, drug cases have spread to all areas, especially in big cities, and it is even said that currently in big cities there are no areas that are free from the dangers of drugs, drugs have now entered areas such as RW and even at the RT level. The condition of drug problems, especially in big cities, has become a very complicated problem. Currently, the number of drug abusers is increasing significantly [1].

One of the government's serious steps in handling narcotics cases is to enact Law Number 35 of 2009 concerning Narcotics. As discussed in Law Number 35 of 2009 concerning Narcotics, victims of drug abusers must undergo medical rehabilitation and social rehabilitation. Listed in article 1 of Law number 35 of 2009, medical rehabilitation is a process of integrated treatment activities to free addicts from drug dependence. Furthermore, the definition of social rehabilitation is a process of integrated recovery activities, both physical, mental and social, so that former drug addicts can resume social functions in community life [2]. Drug rehabilitation is a form of therapy where clients with drug dependence are placed in a closed institution for some time to educate users who are trying to change their behavior, able to anticipate and overcome the problem of relapse [3].

Biophilic architecture is a concept that has the principle to foster a positive relationship between humans and nature with architecture that aims to improve the welfare of human life mentally and physically by integrating nature either by applying natural materials or through natural forms into the design [4]. Throughout history, mankind has interacted with nature, which has many benefits in terms of physical health and psychological health [5]. Nature has been used as a resource to help people feel comfortable with their rehabilitation and treatment and to improve their quality of life [6].

Natural elements play an important role in the concept of a healing environment. In the outdoor space of the addict rehabilitation center, there are various natural elements such as trees, grass, water, sky, stones, flowers, and birds that contribute to the application of the healing environment concept in the outdoor space. The outdoor space in the drug rehabilitation center offers a different experience, such as there is a privacy area inside the

gazebo so that rehabilitators can enjoy solitude with nature and become a place to gather and socialize by enjoying nature in rehabilitation center for drugs addiction [7].

2. Method

The design process involves several systematic approaches. Initially, a field study is conducted to assess the site's physical characteristics, surroundings, and potential boundaries. Then analyze the buildings around the site related to the needs of the drug rehabilitation center, site and environment approach, and the last is to conduct a literature study related to the drug rehabilitation center and the theories that support the design. The data that has been collected are divided into primary and secondary data. Primary data consist of local regulations, site data, and original state of the site. Secondary data is the studies that have been conducted that contains comparative studies of building with similar themes and functions.

3. Result and Discussion

The title of this project is “Rehabilitation Center for Drug Addicts with a Biophilic Architectural Approach”. This project is an effort to reduce the number of drug users in Indonesia, especially Medan, North Sumatra. This location was chosen based on consideration of the things that rehabilitation center needs.

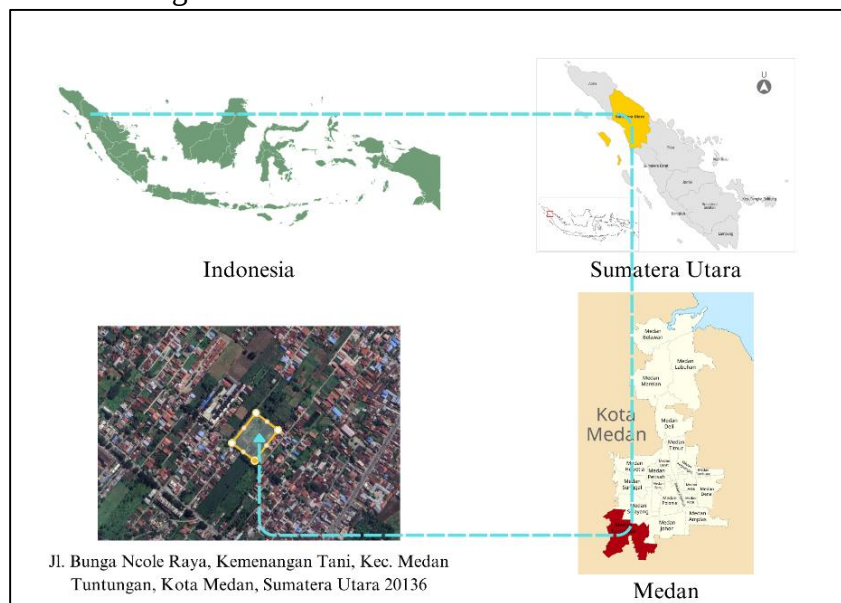


Figure 1 Project Location

3.1 Mass Building Concept

The basic form of this building was originally a form that followed the shape of the site, then with consideration of the site analysis, regulations, entry to the building, zoning division and application of biophilic themes such as parks in the building. creating such a form

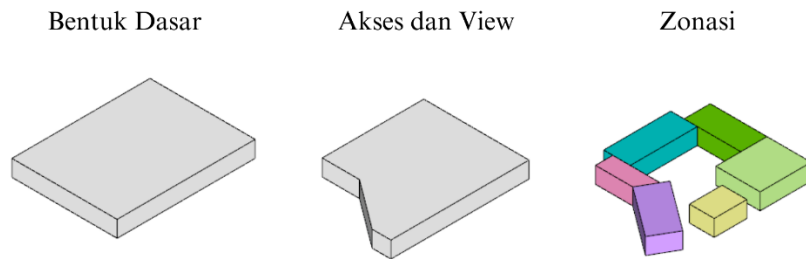


Figure 2 Mass Transformation

The first floor is where rehabilitation activities are carried out, such as medical, social, and aftercare rehabilitation. Created and arranged based on the zoning of the building division, then from the flow into the building, and the distinction between the service entrance and the main entrance.



Figure 3 Ground Plan

The 2nd floor is the residence's bed and the management area, located on the 2nd floor because it is private, needs tranquility and is the place with the best view of the site.

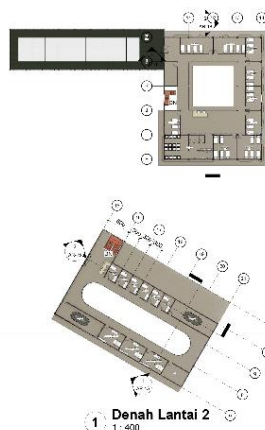


Figure 4 Second Floor Plan

3.2 Outdoor Concept

The outdoor concept of this project is taken from the biophilic concept. The protective fence that limits residents from escaping is designed like a green wall that makes it seem like it is one with nature. The provision of an outdoor waiting room, a water garden next

to the building, a fish pond in the middle and a fountain at the back, the presence of water in these places is an implementation of the biophilic concept.

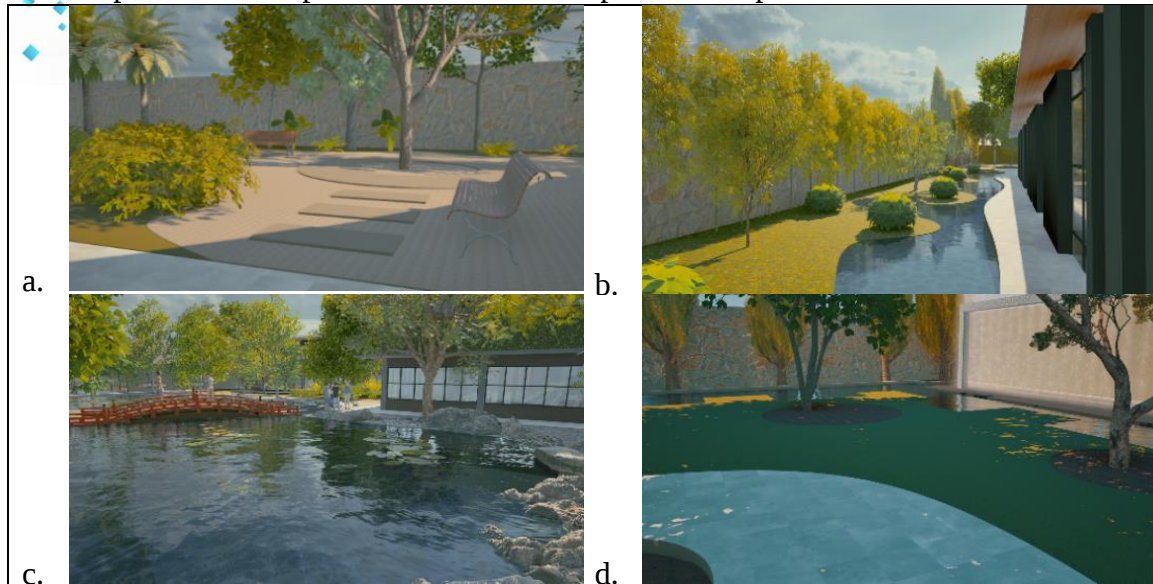


Figure 5 (a) Outdoor Waiting Room; (b) Water Garden; (c) Fish Pond; (d) Fountain.

3.3 Indoor Concept

The biophilic concept that will be applied to the indoor part of the building is the use of materials that resemble nature and natural lighting in every part of the building. these things can create an atmosphere similar to the original natural conditions and apply it to the inside of the building.

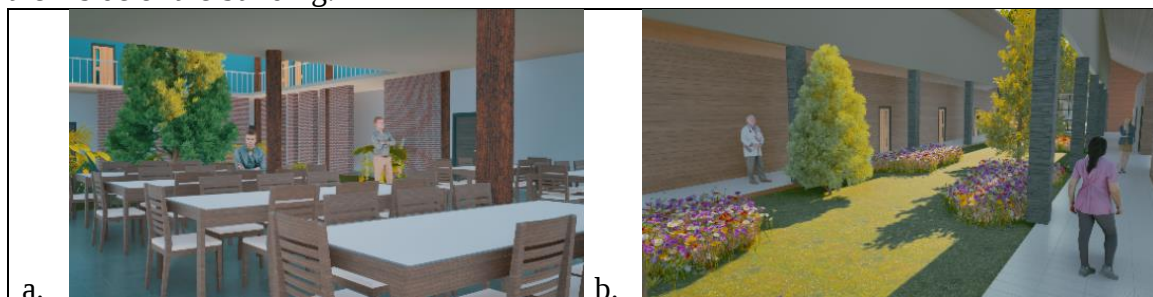


Figure 6 (a) Materials on the interior; (b) Inner Garden

then the presence of water and the opportunity to interact with nature is expected to help patients/residents feel better.



Figure 7 (a) Water Garden from Inside; (b) Inner Garden

3.4 Facade Concept

The materials used in the building facade are raw and natural materials, so that they can imitate / blend with nature. The cantilever on the building is made so that sunlight does not directly lead to the glass facades. The green wall in the building is expected to cool the inside of the building and cover the piping attached to the building.



Figure 8 (a) Front Facade; (b) Facade with Green Wall

4. Conclusion

The design of this drug addict rehabilitation center aims to overcome the problem of drugs in the Medan city by accommodating these drug abusers helping them overcome addiction and helping them return to society with a biophilic architectural approach that involves nature into buildings that are expected to help them in the recovery process.

5. Acknowledgements

This research is a study of designing a rehabilitation center for drugs addicts with biophilic architectural approach, which aims to reduce the number of drug users with the help of nature in Medan. The author would like to thank Department of Architecture, Faculty of Engineering, University of North Sumatra and all parties who have assisted in this research and design.

6. Conflict of Interest

The authors whose names are listed below certify that the manuscript does not have a conflict of interest.

Ruben Alexandre Pakpahan

This statement is signed by all the authors to indicate agreement that the above information is true and correct (a photocopy of this form may be used if there are more than 10 authors):

Author's name (typed)

Author's signature

Date

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