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SEMINAR ON BUILT  
ENVIRONMENT  
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(USBET) 2023**

**SUSTAINABLE BUILT  
ENVIRONMENT**

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## A STUDY OF LANDSCAPE IMPLEMENTATION ON HIGH-RISE RESIDENTIAL IN KLANG VALLEY

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### ABSTRACT

*A high-rise residential building is a type of housing that consists of multiple dwelling units on the same piece of property. In other words, this tall modern building also called apartment or condominium. It has been proven that proper landscape on high rise housing provides essential environmental, nice view, and recreation benefits to an open space. Applying the sustainability concept of the landscape on help to create a conducive and responsive environment of housing development. This paper presents a brief of conceptual view on the important aspects of implementation of the landscape on high-rise housing development in sub-urban areas. A study on previous research and references such as journals will be done to help providing a fact on the importance aspect of using up landscape elements in housing areas. Windows on the Park, Bandar Tun Hussein Onn, Cheras will involve in this study to be observe and analyse to interpret how the landscape give benefits to human and surrounding. It is hoped that this paper may possibly provide significant information on landscape design towards influencing the conducive environment of the high-rise housing. This study also can become a benchmark on the upgrading the sustainability of living on high-rise housing.*

**Keywords:** *landscape, high-rise housing, sustainability, human comfort, elements*

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## **INTRODUCTION**

Landscape architecture is about arranging things like plants and outdoor features in places like gardens and parks. It's done to make cities and rural areas look nice. Landscaping is used in different places, from small parks to big residential areas, to make them more attractive. This can also help replace natural areas lost when new buildings are constructed.

In tall apartment buildings, landscaping is important. It means coming up with ideas to make the outdoor areas in apartments and condos look good. This is to make sure people living there feel comfortable.

Landscaping in tall buildings helps create green areas that make life better for the people living there. This makes places like the Klang Valley great to live in. Good landscaping also makes it nicer for people to do their daily activities and deals with space issues. It also makes the neighborhood look better by mixing nature and buildings (Hakim R, 2004).

## **PROBLEM STATEMENT**

In the Klang Valley, many people prefer to live in tall buildings due to their fast construction. As more people move in, a community forms. This essay focuses on the importance of landscaping in these buildings for improving community life. People need more than just a place to live; they also need a social environment that makes them feel good and improves their lives. The presence of plants and landscapes in high-rise housing plays a vital role in shaping the residents' lifestyle and mental well-being. (Source: Daniel, C.W.H. and Wei, G., 2013). Therefore the primary objective of this research is: To identify the importance of landscape on high-rise housing that effect comfort level for occupants ; To identify the implementation and developer approach on landscape architecture in high-rise residential in Klang Valley.

The scope of this study will be carried out on one high-rise residential in the area Klang Valley. The case study was chosen is Windows on Park, Bandar Tun Hussein Onn, Cheras. The implementation of landscape architecture will be analysed to identify the function and benefits to occupants. This apartment was chosen due to its located in Klang Valley and it was thoughtfully developed by the developer also has many intriguing components that interesting to be discuss.

The data gathered in this study are expected to come out with an idea to make landscape in residential area is one of important elements that need to be add into any high-rise housing development in Klang Valley. Lastly, this paper also aims to

bring a new understanding and highlight the importance towards implementation of landscape architecture in residential area for users to enhance their life and also upgrade their comfort level and quality life.

## **LITERATURE REVIEW**

### **Introduction to high-rise housing**

A high-rise residential building is a tall building with many homes on the same piece of land. People like these buildings in cities because land is costly. They have things everyone can use, like a playground, pool, gym, and security system that works all the time and has cameras and special cards for entry (Abd-Wahab et al., 2015). High-Rise Housing and its advantages

People in cities want to live comfortably and in style, they are choosing to live in tall apartment buildings. More people are wanting these buildings because there are more people and money in society nowadays. Also, having things like trains and shops nearby is making city residents buy apartments in these tall buildings. People living there can also use shared things like pools, gyms, gardens, and security that the building provides (Daniel, C.W.H. and Wei, G., 2013).

Tall buildings have good things about them. People on higher floors can see nice views (unless other tall buildings block them). They also get more privacy in the city. These buildings are often in the middle of the city, so it's easy to find things like shops and transportation. There are many neighbors, so it's easy to make friends. Living higher up means less noise and cleaner air. Some people like that there are more people around to meet. The building also keeps out criminals and makes people feel safer. People in tall buildings don't have to take care of yards and fixing things like people in houses do. They pay for others to do this for them (Chen Jinsong, 2004).

### **High-Rise Residential Development in Klang Valley**

The Klang Valley is a Malaysian urban conglomeration centred on the federal territories of Kuala Lumpur and Putrajaya, as well as its surrounding main cities such as Cyberjaya, Petaling Jaya, Shah Alam in Selangor. Due to a lack of land, developers are increasingly looking for opportunities to develop high-rise residential buildings, particularly in Malaysia, one of the world's fastest developing countries.

As Klang Valley is the area that cover major city centre of Malaysia, there is a high living density rate, and it leads to a limited of choice for the public in choosing a type of residence. Public will find high-rise residential their first choice as a place to live because there are many possibilities in picking a high rise residential according to their satisfaction and convenience. This is supported by data from a property expert,

which shows that the total supply of high-end condominiums/residences in the second half of 2021 was 66,128 units. About 6,971 units (16 schemes) for completion by first half 2022, following the country's transition to Phase 4 of the National Recovery Plan, (Chung Ying Yi. 2022).

## **Definition of Landscape**

When two key components, pattern components and process components, come together, a landscape is created. Patterns are physical elements that are developed for the user, whereas the process element is the outcome of the pattern's function or activity. For example, a cycling path exists within a park, and visitors to the park ride their bicycles along the route. The pattern and process components have been combined as a result of this situation. Cycling activities are a process, while bicycle routes are a component of the pattern. In a nutshell, a landscape is a space comprising physical features such as topography, vegetation, and rocky landscapes, as well as culture human presence and activities carried out through those physical aspects. (McGarigal, 2013)

## **Landscape Elements**

There are many components to a landscape, including things like greenery, water, paving, objects, and so on. The following three components were particularly chosen to be introduced.

- **Green Space Elements**

Residential green space is not only the primary outdoor recreation area for locals, but it is also one of the most widely dispersed and often used areas in the urban green system. No other aspect in the living environment could take its place. Green frequently appears on the margins of sites, in the landscape background, or within specific sites. Greenery can be found all across residential neighbourhoods, including in plazas, along the edges of different functional zones, between buildings, and surrounding bodies of water. Even though this green is divided, it yet maintains its unity for the environment of the space. It contributes to psychological management and spiritual relaxation in a beneficial way. It could also somewhat modify the microclimate. From my perspective, green space elements is a crucial component of the outdoor living environment. (Ye, J. 2009)





**Figure 2.3 : The example of green space elements (Source: <https://www.loveyourlandscape.org/benefits/the-benefits-of-landscapes/>)**

- Water Space Elements

The water body is a landscape element that changes more dramatically and can take on diverse patterns. People are hydrophilic on an emotional level and have innate needs for water. Water has a distinctive quality known as its unpredictability and flexibility. A lovely water picture can be therapeutic and bring forth a good mood. Water's romantic hue has the power to arouse an increasing number of emotions and creative ideas. Swimming pools, fountains, artificial waterfalls, and other types of water features can be found in the outside environment of residential areas. To create a comprehensive outdoor habitat with other facilities, a landscape water body should be integrated with hydrostatic and hydrodynamic forces, (Ye, J. 2009).



**Figure 2.4: The example of the water space elements (Source: <https://www.iproperty.com.my/guides/green-building-index-key-criteria-gbi/>)**

- Pieces Space Elements

The breadth of pieces, which play a significant role in landscape aspects, is extremely vast and includes such things as sculpture, fountains, gallery frames, building, and other items. They frequently have a variety of expressions, but they also have an easy time grabbing people's interest. Pieces have greater elasticity than any other landscape component and can serve as a space's focal point as well as a focused representation of its personality, (Ye, J. 2009).



**Figure 2.5: The example of pieces space elements (Source: <https://theveritasdesigngroup.com/expertise/landscape-design-2/>)**

## **The Important Landscape to High Rise Housing**

Firstly, having nice landscaping is really important because it gives people chances to relax and enjoy their surroundings. Understanding its different values can help protect and make the best use of these spaces (Jim, C., & Chen, W. Y. 2010).

Secondly, people don't just need buildings for shelter; they also need a calm and nice environment for good mental health and a better life. Physical things like landscapes play a big role in keeping the people who live in the buildings mentally healthy and happy (M. Firdaus, A. Halim, M. Rizal, 2021).

Next, in tall buildings, areas with landscaping are made not only to cool down the building, but also to provide nice views and spots where people can feel better mentally. Two important parts of landscaping are the green things like trees and plants (softscape), and the human-made things like benches and gazebos (hardscape). Hardscape is often set up first to make space for softscape later (Fitriadi, Ramzi, Izawati, Ismawi, 2014).

Furthermore, being in nature helps people feel happier, less stressed, and sometimes even improves their mental health. Spending time in natural places can make people feel joyful, relaxed, comfortable, and peaceful (Korpela, 2002).

Lastly, making tall buildings feel comfortable when it comes to temperature is hard, especially in hot and humid places. Tall buildings are affected more by things like wind, sun, and rain than shorter buildings in such climates (Chia Sok Ling et al., 2007).

## **Residential Area Landscape Classification**

In residential areas, the way outdoor spaces are categorized can be based on the activities people do there. This classification comes from Jan Gehl's book "Life between Buildings" (2001) and divides activities into three types: necessary, unplanned, and social. Each type needs different things from the outdoor space. So, residential landscapes can be grouped into three types based on these activity types

- Necessary Activity Space

Essential activities include things like work, studying, shopping, waiting, and other everyday actions. These are the things people need to do as part of their daily routines. Because a lot of these activities involve walking, pathways become really important in these spaces. This kind of landscape serves as the base for what people do, and other spaces are created around it (Jan Gehl, 2001).

- Spontaneous Activity Space

Spontaneous activity space means places where people do things when they feel like it and the conditions are right. This could be walking, playing with pets, or enjoying fresh air. These activities need a nice environment and often happen when people really want to do them. So, these spaces need good design. For example, paths could be made of interesting materials like stepping stones or gravel instead of just plain cement. These places can also have things like sculptures and fountains that make them more fun and encourage activities (Jan Gehl, 2001).

- Sociality Events Spaces

The term "social activity" describes a variety of activities that individuals enjoy engaging in in public places. It comprises greetings, small-scale recreational activities, conversation, and games for youngsters. Such activities could be created on several occasions and might be seen as a continuation of unplanned activities. 13 The social activity space is diverse, and most public spaces can be used for social activities. Naturally, the activities will still be impacted by the space's quality. People will want to hang out, relax, and remain in the same space if it offers a nice and pleasant atmosphere. Additionally, it will definitely increase the variety of social events, improve resident communication, and promote a lively atmosphere in residential areas, (Jan Gehl, 2001).

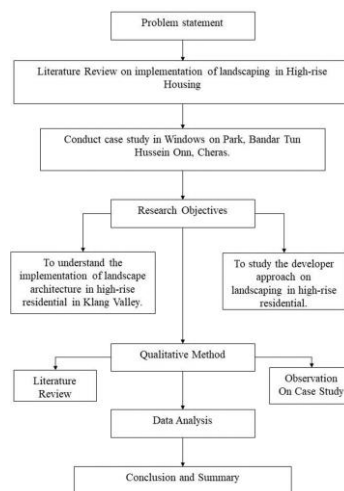
## **RESEARCH METHODOLOGY**

This research was carried out using a method of qualitative. Data are gathered through two major methods which are observation and literature review which involves textual or visual analysis from publications. The variables were analysed to provide illustrative data in the form of image the conclusions of this study. This research also concentrates on an in-depth analysis of high-rise housing which are Windows on Park, Bandar Tun Hussein Onn, Cheras. Various data is used such as

from observation, and literature review to gain data from multiple resources from journal, articles and book and also photograph.

Data collection method of the case study will be form of observation regarding the site layout of the sample of study. The research incorporates in as will be studied and analysed. The same procedure used for different phases for case study. This is for analysed the development of housing from each.

The data obtained from the method of site observation and literature review shall be compiled and analysed in the next chapter. In order to conclude the research, the data gathered will conclude relative to the study done previously via visual or textual analysis through publications.



**Figure 1 : The research methodology conceptual summary flow chart.**

## FINDINGS

This chapter describes and analyses high-rise residential case studies. One case study been chosen to complete the research. This case study chosen for this research because of their area in the Klang Valley region. The context of the project, the developers, the design of the park, and the surrounding environment will all be considered.

### Project background

Windows on the Park is one of the condominium type residential buildings located in Bandar Tun Hussein Onn, Cheras. The company GDP Architects designed these structures, which is owned by Selangor Dredging Berhad (SDB), the project's developer. The residential complex Windows on the Park is surrounded by Cheras'



remaining lush greenery and consists of 3 residential towers, each with a height of 15, 17, and 33 stories.

The towers' unique designs, each with a carved-out "window"; tall portals with multiple stories through which the landscape flows continuously, fusing architecture, art, and nature together, gave rise to the name of the complex. In order to create a bigger scale park environment, the three gateways work together to create a visual axis that connects and frames each of the three parks: the clubhouse park, the quiet park, and the active park. Movement around the park is also governed by the visual axis, which is defined by sculptures that serve as discussion starters, rest stations, and distance markers.



**Figure 2 : The project Windows on Park Bandar Tun Hussein Onn,Cheras**  
(Source: <https://www.propsocial.my/developments/windows-on-the-park-4035>)



**Figure 3 : The project Windows on Park Bandar Tun Hussein Onn, Cheras**  
(Source: <https://www.propsocial.my/developments/windows-on-the-park-4035>)

## **Background of Bandar Tun Hussein Onn, Cheras**

Bandar Tun Hussein Onn is a residential area in Selangor, known as the 9th Mile Cheras. It's named after a former Prime Minister and is about 20-25 minutes from Kuala Lumpur City Centre. It's a favored place for locals to live due to its green surroundings and useful facilities. Covering 752 acres, it's the biggest housing development in the area, housing around 18,000 people.

More construction is planned to improve its reputation beyond just a middle-class area. Its popularity is because of good roads connecting it to nearby neighborhoods. It's well-liked due to its closeness to public services – supermarkets, schools, a mosque, and Columbia Asia Hospital are all within a 15-minute drive.

## **Developers Approach**

As mentioned by Muhammad Firdaus Abdullah, Abdul Halim Ismail, and Mohd Rizal Zakaria in 2021, the company behind this residential project is SDB Properties, a well-known name in Malaysian real estate development. They've been around since 1962 and were recognized as one of Malaysia's top 25 real estate developers in 2012. Their efforts were also acknowledged in 2013 with the FIABCI Prix d'Excellence Award for their outstanding contributions. SDB stands out by incorporating green technology and sustainable practices into their projects. They tend to include significant landscape designs in most of their housing projects. This approach effectively appeals to buyers, as it promotes a healthy lifestyle along with spacious, comfortable, and well-maintained gardens. This trend is common in Malaysia's housing construction, followed by developers like SP Setia and Eco World, who also use similar strategies to attract buyers. SDB Properties has been responsible for projects like the SqWhere Serviced Apartments, Dedaun, and By The Sea. Other nearby condominiums include Maxim Residences @ Cheras KL, Vina Versatile Homes@Cheras, Amaya Maluri, and Shamelin Star.

## **Landscape Approach**

Based on my observation, nearly half of the land area of the condominium complex at Windows on the Park is used for landscaping. This is consistent with the architect's goal of creating a structure surrounded by a garden so that every residential unit in each block has a clear view of the garden area. The strategy employed by architects, which divides the landscape's parts into the perimeter garden and the central garden. This strategy fits with the condominium's high population density.



**Figure 4.4: The perspective of landscape view (Source: <https://www.sdb.com.my/products/windows-on-the-park>)**

### **The Perimeter Park**

The perimeter park is a part of Selangor's rules for development, stating that any building or project must have a park along its borders, at least three meters away. This park is about 4 to 7 meters wide and serves as a nice recreational path. The path is lined with different trees and bushes, making it look fresh and beautiful. It's also practical as it acts like a barrier from noise between the neighborhood and the nearby highway. Since this condo in Bandar Tun Hussein Onn is close to a busy road, it's important for architects to design a landscape that reduces noise. Moreover, this perimeter park also looks good and acts as a separation between the condo and its surroundings – the road on the east side, and other building sites to the south and west. This fits with the architect's plan to create a condo environment that's connected to the park.



**Figure 4.5: The layout plan of Windows on Park (Source: <https://www.sdb.com.my/products/windows-on-the-park>)**



**Figure 4.6: The view of perimeter park (Source: Journal Design + Built. Pendekatan reka bentuk lanskap pada bangunan tinggi.)**

### **The Central Park**

Based on observation on layout of the project, the Central Park is situated between two apartment buildings. We can see the park is made up of one sizable green courtyard and a number of sporting venues, including a gym and a swimming pool. This area can be access by occupants from Block 01,02,03,3A,05,06,07,08. The park is regarded as a green lung for an 8.9-hectare condominium complex. This park also as a centre for green area that people can spend or do their activity daily. This park, which has a width of about 50 metres, inadvertently forms a dividing zone and an open area between two nearby residential buildings. This condition simultaneously provides comfort to the residents while ensuring sufficient airflow inside the home. This situation also can prevent urban heat island that can affect the occupants. The types of plants that are used also matter. Betel nuts, palm trees, and coconut trees are frequently used in the landscaping at Windows on the Park to improve the area's aesthetic appeal. These trees are common in tropical nations, which encourages developers to preserve them.



**Figure 4.7: The layout plan of Windows on Park (Source: <https://www.sdb.com.my/products/windows-on-the-park>)**





**Figure 4.8: The plan and view of central park (Source: <https://www.gdparchitects.com/windows-on-the-park>)**

## **Discussion**

Properly designed landscaping around tall buildings can increase their value and promote community development and social connections. This study shows that when there's a good design, there's also an increase in social interactions, comfort, positive image, and more users and activities in the area. The analysis highlights that the developer's approach is a major factor in creating a successful landscape. Additionally, a well-designed landscape encourages people to socialize in the park. This means that having clear goals and a thoughtful layout for landscaping can boost social activities and improve the overall livability for users. This, in turn, enhances the quality of life for users. When more people visit landscaped areas, they bring more activities and opportunities to shape the space's identity and image.

## **CONCLUSION**

To sum up, successful high-rise landscaping depends on several key factors. A strong developer's vision is crucial for effective landscaping, followed by considerations for sociability, natural surroundings, and park design. It's important for landscaping to be integrated into every high-rise residential project in Malaysia. This study emphasizes the significance of well-designed park spaces and their utilization for achieving success. An example like Windows on Park illustrates this, where their jogging track is designed using appropriate materials, and the park is accessible to the public. In a tropical climate, maximizing the benefits of natural elements is essential, such as using wide canopy trees for shade in the case of Windows on Park's landscaping.

In the future, researchers could look into different ways of landscaping based on factors like climate and economic backgrounds. This would help create better parks for various groups in Malaysia. Also, comparing different types of urban areas and climates could lead to improvements in designing landscapes for tall residential buildings in Malaysia.

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Tarikh : 20 Januari 2023

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