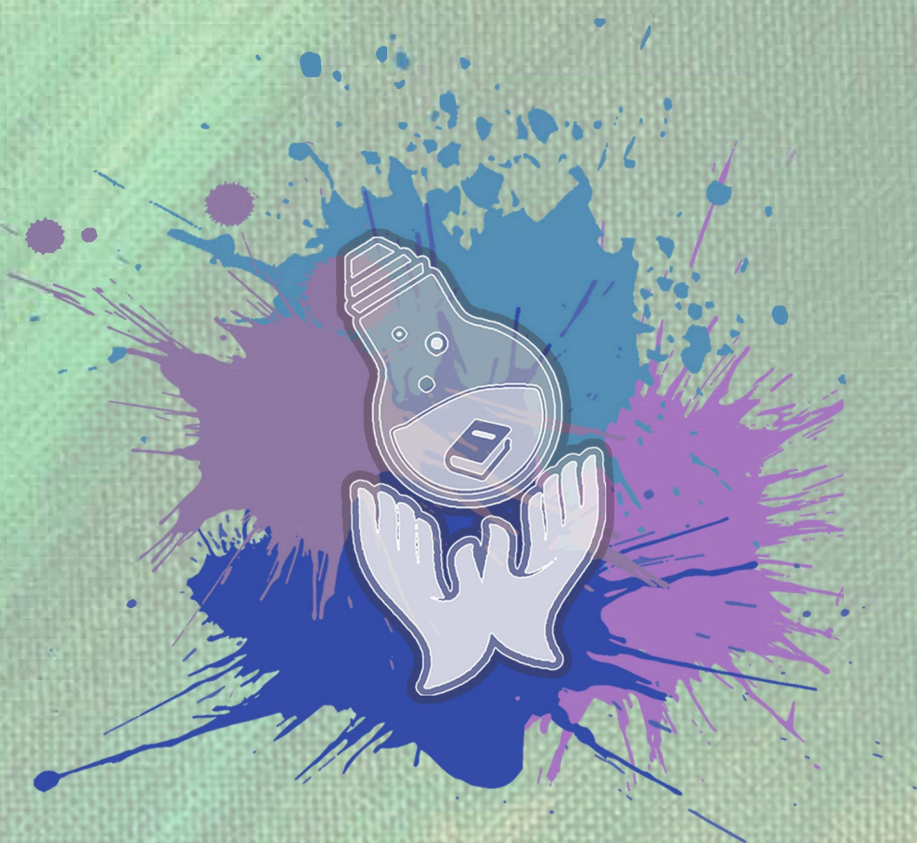




UNIVERSITI  
TEKNOLOGI  
MARA

F|S|P|U  
FACULTY OF ARCHITECTURE,  
PLANNING AND SURVEYING

2019



---

# 4<sup>th</sup> UNDERGRADUATE **SEMINAR** 2019

---

BUILT ENVIRONMENT & TECHNOLOGY

---

**e-PROCEEDING**

eISBN-978-967-5741-97-5



organised by

**FACULTY OF ARCHITECTURE, PLANNING & SURVEYING**

UNIVERSITI TEKNOLOGI MARA PERAK BRANCH

SERI ISKANDAR CAMPUS

# WHEELCHAIR USERS ACCESSIBILITY TO SHAH ALAM'S LAKE GARDEN

Ahmad Akmal Mohd Zikri<sup>1</sup> and Mayamin Yuhaniz<sup>2</sup>

<sup>1,2</sup> Department of Architecture, Faculty of Architecture, Planning and Surveying,  
Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak  
Email: *akmal.zikri@gmail.com*<sup>1</sup>, *mayaminyuhaniz@gmail.com*<sup>2</sup>

## **Abstract:**

Rehabilitation according to Person with Disability Act 2008, refers to a process aimed at enabling person who are born with disability to attain and maintain their full physical, mental, social and vocational ability and full inclusion and participation in all aspect of life. (Person with Disability Act 2008, 2014). Integration of wheelchair bound individual into the society requires accessibility to any building or public spaces, including public park. This study assessed the wheelchair user's accessibility of Shah Alam's Lake Garden. The grade of the ramp in the parking area are measured and calculated. Accessibility was determined by comparing the collected information with The Malaysian Standard MS 1184 2002. Only four out of six (66.7%) carpark studied that have ramp. One out of six (16.7%) ramp that are studied actually complies to the maximum grade of ramp which is 1:12, as highlighted by The Malaysian Standard MS 1184.

## **Keywords:**

Wheelchair; Accessibility; Public park; Carpark; Ramp

## **1.0 INTRODUCTION**

Restriction of mobility is likely to be the most common handicap amongst people with disability. In order to facilitate individual with disability related to the lower limbs, the use of wheelchair is essential as a temporary or even permanent solution. (Hamzat & Dada, 2005) Wheelchair provide the users the aids with include mobility and resuming their involvement in community and social activities. Even with all positive benefit that the user received from the using the wheelchair, will seem meaningless if there is lack of wheelchair accessibility to public spaces that is intended to be use in their daily life. Person with Disability Act 2008, clearly state that person with disability shall have the right to access and use public facilities, service, and building open or provided to the public on equal basis as the person without disabilities. Spaces that are designed to be accessible to public should be design with need of all person in mind. This will ensure that all person have the opportunity to participate in social and leisure activities. Based on the problem statement, the main research question of this study are as follows:

- i. Does the Shah Alam Lake Garden is accessible to the wheelchair users?
- ii. Does the circulation within the Lake garden is design with wheelchair users in mind?

To answer the above questions, we have to define the extent of issues related to wheelchair user's accessibility by reviewing existing literature. The literature must be related to issues on issues on wheelchair user's accessibility. Next is to develop a tool or instrument and finally to quantify the level of accessibility itself. Thus, the objective of the study are as follows:

- i. To identify the presence and usability of ramps from the carpark to the pathway within the lake garden.
- ii. To determine the condition of the existing pathway to be maneuverer by wheelchair user

## **2.0 LITERATURE REVIEW**

### **2.1 Shah Alam's Lake Garden**

Shah Alam Lake Garden is a 43-hectare public park that is located at the heart of Shah Alam. The park was design by Japanese landscape architect, Fumaki Takano, and consist of three main lake-western, central, and eastern. Other than functioning as public park, the lake garden is also becoming

habitat of wildlife such as White Pelican, Egret, and Heron. The lake garden also connects most the tourist attraction point of the city (Shah Alam Lake Gardens, 2019)

## **2.2 Current Accessibility in Malaysia**

Malaysian has established the first right-based legislation for people with disabilities, entitled Person with Disabilities Act in 2008. With the enforcement of this act, the government hoping to provide person with disabilities with better public transport, amenities and service, as well as better access to sports, leisure and cultural activities. (Abdul Kadir & Jamaludin, 2018). In spite of that, even with the increasing number of accessibility regulation passed in Malaysia, the number of public building that have made modification or alteration as required by the standard code are very small (Chen, Jo, Za Ong, & Kotbungkair, 2013)

## **2.3 Malaysian Standard**

The evaluation instrument of this standard is Malaysian Standard for accessibility. To date there are three current accessible design standards in Malaysia MS 1184; MS 1331; MS 1183. The design standard that were used in this standard was the Malaysian Standard 1184:2014 (Second revision). Standard provide guide line for the design of accessible facilities and detailed specification that are too intricate to be included in code of regulation (Abdul Kadir & Jamaludin, 2018).

## **3.0 METHODOLOGY**

The study is a descriptive survey researching involving one-time observation of the carparks provided to the lake garden. Accessibility of the carpark is recorded and analysed by comparing the taken measurement to the maximum required dimension as stated by (Malaysian Standard 1184:2014 (Second revision), 2014) is considered accessible when at least a ramp is present, and the gradient of the ramp is complying to the required dimension. The following measurement is taken and recorded in millimeters.

- i. Height of ramp: the vertical distance from the bottom to the top of the ramp at the highest point
- ii. Ramp slope length: The distance between the beginning and end of ramp slope
- iii. The grade of ramp: The Ratio of the height and length of ramp.

The tool used for the collection of the measurement were Measuring tape. The grade of the ramp is calculated by simplify the ratio of the height of the ramp: the length of the ramp. The study is unable to be carried out on one out of seven parking spaces provided due to ongoing construction works.

## **4.0 ANALYSIS AND FINDINGS**

The studied is conducted at 6 different parking spaces throughout the lake garden. The parking spaces are labelled as Carpark A, Carpark B, Carpark C, Carpark D, Carpark E, and Carpark F. After the studied have been carried out, evidently Carpark A and Carpark D does not provide any ramp to be used at all, making the access point that can be access by wheelchair user from the carpark only 66%.

Carpark B provide 2 ramps for wheelchair users, the grade of the ramps are 1:11 and 1:7, both are not complied to the Malaysian standard of 1:12 maximum ramp grade. Carpark C also provide 2 ramps but only one of them passed the Malaysian standard with ramp grade of 1:20 while the other is 1:10. Carpark E and Carpark G only provide 1 access ramps, with ramp grade of 1:8 and 1:10 respectively. Inconclusion only one out of six ramps provided by the lake garden are accessible for wheelchair users form the parking area to get into the lake garden.

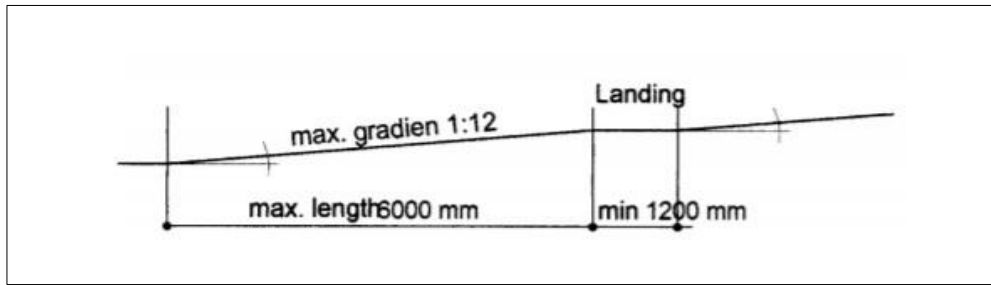


Figure 1: Maximum ramp dimension requirement highlighted by The Malaysian Standard MS1184 2002

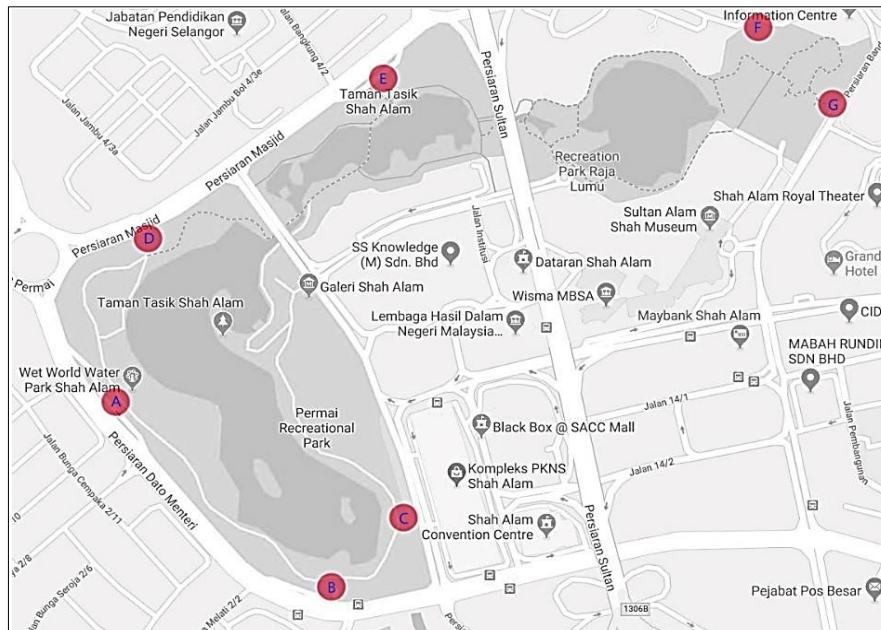


Figure 2: Site plan of the Shah Alam Lake Garden and the location of studied carpark

## 5.0 CONCLUSION

It is proven that the Shah Alam's Lake Garden, does not provide sufficient access for the wheelchair user. Despite the regulation stated by (Person with Disability Act 2008, 2014) that person with disability shall have the right to access and use public facilities provided to the public basis as the person without disabilities. Thus, the responsible authorities should make related alteration or changes, so that the lake garden is more accessible to all users. One step closer to creating an all-inclusive park environment.

## REFERENCES

- Abdul Kadir, S., & Jamaludin, M. (2018). Applicability of Malaysian Standards and Universal Design in Public Buildings in Putrajaya. *Asian Journal of Environment-Behaviour Studies*, 3(6), 29. <https://doi.org/10.21834/aje-bs.v3i6.233>
- Chen, R. K., Jo, S.-J., Za Ong, L., & Kotbungkair, W. (2013). Rehabilitation Services and Education in Four Asian Countries: Thailand, South Korea, Singapore, and Malaysia. *Rehabilitation Education*, 21(4), 231–240. <https://doi.org/10.1891/088970107805059616>
- Hamzat, T. K., & Dada, O. O. (2005). Wheelchair Accessibility Of Public Building In Ibadan, Nigeria. *Asia Pasific Disability Rehabilitation Journal*, 16(2), 115–124.
- Malaysian Standard 1184:2014 (Second revision) (2014). Malaysia. Person With Disability Act 2008 (2014). Laws Of Malaysia.
- Shah Alam Lake Gardens. (2019). Retrieved from view-source:<https://www.malaysia-traveller.com/shah-alam.html>