



Towards Parks for All – a Case of the Manara Park, Erbil, Iraq

Salem Tarhuni ^{1*}
salem.mokhtar@tiu.edu.iq

Shad Sherzad ²
shad.sherzad@tiu.edu.iq

Shahd Ahmed ³
shahd.ahmed@tiu.edu.iq

^{1,2,3} Department of Architecture, Faculty of Engineering, Tishk International University, Erbil, KRG, Iraq

* Corresponding author

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Abstract

Erbil city has many natural landscapes that contribute with the tourism industry in the city and its parks play a role in this field. The city's parks attract local people and foreign tourists. They provide nice environments that attract disabled people too. Nevertheless, those with disabilities face barriers while visiting the parks. The aim of the research is to study the accessibility of facilities for handicapped individuals in the Manara Park in Erbil and, to investigate the reasons behind unavailability of many requirements. The Qualitative research approach was adopted. Multiple methods were used for collecting information including a review of international codes and local regulations in the field, observations, and an interview. The study delineated the challenges encountered by those with disabilities while visiting this park. The findings demonstrated that a high percentage of observed items contradict to disabled people's needs. The reasons behind the noncompliance are leniency of applying relevant regulations, the lack of local code of practice and, insufficient funding for refurbishment work at parks. Accessibility for all in terms of providing disabled people's requirements will increase the disabled visitors to the parks in the city and contribute with improving their mood and health. The findings of this research will assist designers and decision makers in taking into account the needs of handicapped individuals towards 'Parks for all' concept.

Keywords: Disabled People; Accessibility; Park; Erbil; Iraq.

1. Introduction

The Disabled people need to feel that they are part of the community and that they will not feel neglected. They are not only suffering from their disability, but also suffer from depression and other health problems because of staying at home without participating in social activities. Therefore, they must be provided with the opportunity to fulfill the necessities of their everyday lives in public areas without depending completely on others. Parks and greenery play a crucial part in the well-being of humans' existence, due to their capacity to support informal leisure activities, promote social interaction, improve the general standard of living, and promote collective accountability and a feeling of satisfaction among citizens. Green spaces



also have a positive impact on health (Azmi & Karim, 2012). All these activities in parks can affect positively on disabled people's mood and health. Nevertheless, barriers in such environments deter persons with disability (PwD) from accessing these benefits, and the sensitivity towards their plight also discourages their families from frequenting these areas. Regarding the enumeration of disabled people, the first world report on disability, produced jointly by the world health organization and the world bank, suggests that more than a billion people in the world today experience disability (WHO, 2011). In Iraq, the results of a survey that were presented in Al-Ezzawi et al. (2019) showed that:

“The percentage of people who have difficulty in vision, hearing, movement, understanding, perception, or communication reached 8.4% [...] In 2016, the number of persons with disabilities which was measured by a statistic conducted in the three safe provinces has reached 14.8% visual impairment, 9.2% hearing impairment, 42.4% physical impairment, 21% intellectual disabilities, and approximately 12.6% disabilities related to communication and self-care.”

Erbil city has many parks that contribute to the tourism industry in the city. The city attracts local and foreign tourists, and its parks play a role in this field. Accessibility for all will contribute to increase the visitors to the parks and other tourism sites in the city. However, these parks do not meet the requirements that handicapped persons have been looking for (Tarhuni, 2022). The requirements at parks have not yet been evaluated deeply. The objective of this study is to examine the accessibility of facilities for handicapped individuals in the Manara Park in Erbil and, to investigate the reasons behind unavailability of many requirements in local parks. The importance of this research lies in its ability to pave the way for considering disabled people in Parks towards applying 'Parks for all' concept.

2. Regulations that Affect Disabled People in Iraq

Iraq acceded to the international convention on the Rights of Persons with Disabilities in 2013 (UNAMI, 2017). The convention was followed by enacting Act no 38 for the year 2013 regarding the provision of care for persons with disabilities (PwD) in Iraq. It encompasses the objectives and strategies that facilitate the integration of PwD into most aspects of society, without any type of prejudice or bias (The official gazette, 2013). While this Act lacks explicit guidance on practical implementation, it may serve as a foundation for developing local codes of practice in the relevant sector. Furthermore, there is also the Law number 22, which enacted in Kurdistan region, Iraq on Persons with Disabilities. This law includes the rights and protection of persons with disabilities in all aspects of life, such as education, health, social welfare, accessibility, equality, etc. The law obligates the government and official and non-official bodies to abide by the international, technical, engineering, and architectural conditions and specifications that must be met in old and new public buildings, stadiums, public and private facilities, which are needed by persons with disabilities (Kurdistan Chronicle, 2011).

3. Manara Park and its Components

Manara Park was established in 2006. Its area is around 85000 square meters and it is located on Halbja road close to the city centre of Erbil, Iraq. Furthermore, according to the general board of tourism, 'this Park is named Manara because of the historic Choli Minaret which housed in the park's ground. The date of minaret backs to the era of Atabkin, who had power between 1190 and 1232 (General board of tourism, 2011). The Manara Park includes numerous services and recreational facilities (Figure 1).

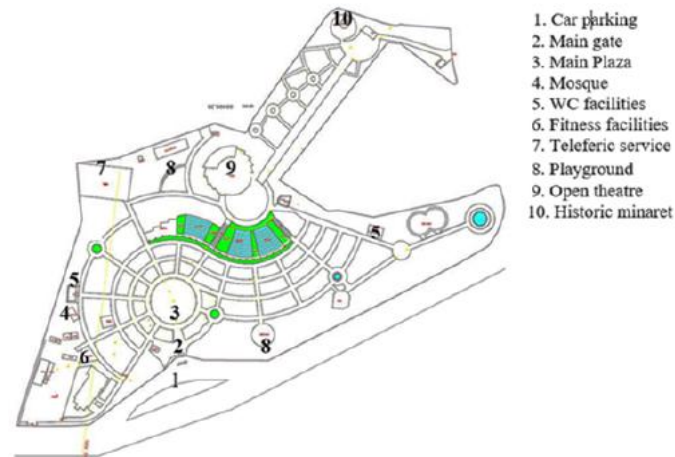


Figure 1. Manara park's components.

4. Methodology

The Manara Park was investigated as a case study to provide a preliminary overview about the challenges that confronting disabled people when access parks' components. Qualitative research approach for collecting information was adopted. Multiple methods were used including observations, an interview, and a review of the relevant conventions and local legislative frameworks relevant to the needs of PwD in Iraq.

During multiple visits to the Manara Park throughout 2022, an in-depth assessment was conducted to determine the extent to which the park meets the needs of individuals with disabilities. The observations were included all the component of the Manara Park. The British Standard (BSI, 2018) was used for evaluation. Furthermore, for examining this issue from parks' management perspective, a Face-to-face interview was done in March 2022 with the director of Gardens and Parks Engineering in Erbil city to investigate to what extent is the awareness of the local parks' authorities regarding disabled people's requirements and the reasons behind unavailability of many disabled people's requirements neither when establishing parks nor in refurbishing of existing parks.

5. Findings of Observations at Manara Park

The Manara Park's components were studied to determine the extent to which the park meets the needs of individuals with disabilities.

5.1 Car parking, Gate, Main Yard and Pathways

A. At the park's gate area there is a slightly different level. It was treated by purposefully ramp to make it easier access for wheelchairs. However, improper curb ramp causes some difficulties to override it for wheelchair users (Figure 2.A).

B. An area for pick-up and drop-off is available, along with a car parking zone situated near the park's main entrance (Figure 2.B). Despite disabled car parking places can be provided within 50 meters of the main entrance, there is not specific places for PwD . Additionally, there is a lack of accessible walkways leading from the parking area to the entrance, necessitating that pedestrians and those in wheelchairs navigate through the parking lot to reach the gate. Also, the curb ramp from the parking level to the gate level is integrated randomly.

C. Upon entering the park, visitors are immediately greeted by the main yard (Figure 2.C). This area is characterized by its level surface and circular shape surrounded by columns. It includes sitting areas that can be used by families or groups. The yard 's ground is non-slippery that can be accessible for disabled people smoothly.

D. Within Manara Park, pedestrian pathways facilitate easy movement across different levels with gently sloping routes (Figure 2.D). The slope of these pathways is maintained at a gradient less than one to twenty, aligning with disabled people requirements and extremely helpful for wheelchair users. Furthermore, the pathways are designed with width exceeds 1.80 m accommodating two wheelchairs to pass side by side comfortably. The choice of surface material for these paths was an interlock pattern of cement-blocks. The surface is visually pleasant appearance, its ability to prevent slips in both dry and wet conditions is high, and has a non-glare surface, ensuring a secure and convenient route for those using wheelchairs and mobility aids. Moreover, there is a surface continuity in the pedestrian routes of the park (no hazard because of loses or poorly laid bricks). Despite the presence of these accessible pathways, the park lacks tactile paving, which is essential for guiding individuals who are visually impaired. Furthermore, there is a pathway occupied by fitness equipment (Figure 5.A) this situation hampers pedestrians' movement at that area, particularly disabled people.





<p>A. The car parking area at Minara Park's main entrance Area.</p>	
<p>B. The main gate of Manara Park, and a curb ramp to the gate level.</p>	
<p>C. The main circular yard at the Manara Park.</p>	
<p>D. Pathways in the Manara Park, .</p>	

Figure 2. Visual Survey of the car parking, gate, main yard and pathways at the Manara Park

5.2 Stairs and Ramps

A. At the Manara Park, the zone of open-air theatre is situated approximately 3.2 meters below the level of the park's entrance. Accessing this lower level is available for pedestrians by smooth sloped pathways (Figure 2.D) or stairs. Two stairs go down to the open theatre area (Figure 3.A). They are neither having handrails on both sides nor having tactile paving at the beginning or ending of stairs that indicates to changing level. The third stair is located between the open theatre area and the historic minaret area (Figure 3.B).

B. A ramp was established attached to the stairs that go up to the historic minaret area (Figure 3.B). Although the ramp has a non-slip surface, it is narrow and dangerous for disabled people, as the gradient of the ramp is about 1/5 (according to BSI, 2018, minimum gradient should be 1/12) and neither having handrails on both sides nor having a raised kerb.

A. Stairs go down to the open theatre area.	
B. Stairs and improper ramp.	

Figure 3. Visual survey of the stairs and ramp at the Manara Park

5.3 Facilities at the Manara Park

A. The Masjid (praying place) in the park is not easily accessible or usable by people with disabilities (Figure 4.A). Many barriers hinder disabled people from using it.

B. Manara Park is equipped with restrooms for both men and women (Figure 4.B), but there are not any facilities for disabled people. The sign indicating the location of the restrooms is small and does not effectively point out their whereabouts. Furthermore, existing WCs are not accessible for disabled people due to several barriers: the space within the restrooms is too cramped for disabled people's use, the lower frame (threshold) of the external door blocks access, the interior doors open to inside and their width is not enough for wheelchair access (less than 80 cm) and, WCs do not include Grab bars.

C. There is a teleferic connects the Manara Park to Shanadar Park which is opposite to it. However, access for disabled people is not available. Stairs are available but there is not any ramp (Figure 4.C). Also, slippery material (marble) was used for flooring and tactile paving is not available.

D. The open-air theatre within the park is situated at a lower elevation compared to the surrounding areas (Figure 4.D). Accessibility to this level is via stairs or smoothly

via sloped paths. Nonetheless, the terrace remains inaccessible to individuals using wheelchairs, who are limited to accessing only the ground level of the theatre.

A. The Masjid (praying place).	
B. WCs facility.	  
C. The teleferic station.	 
D. The open theatre.	 

Figure 4. Visual Survey of the Facilities at the Manara Park

5.4 Equipment and Outdoor Furniture

A. Fitness facilities at the Manara Park are available in two places (Figure 5.A). The first one is a specific area for fitness facility, whereas the second one is a pathway occupied by fitness equipment. This situation is not proper for pedestrians at the park, particularly for disabled people. Disabled people cannot easily use both as they were designed for able-people.

B. There are two Playgrounds in the Manara Park. the Playgrounds include standard play equipment that are not accessible for disabled children (Figure 5.B). The current situation entitlement the children with disabilities to partake in leisure activities and experience their childhood just like any other kids.

C. There are picnic tables at main yard and standard seats at pathways (Figure 5.C). Picnic tables were not designed that disabled people can use and pedestrians' movement at pathways is interrupted partly by the seats.

A. Fitness equipment	 
B. Standard children's playground	
C. Seating areas	 

Figure 5. Visual Survey of the Equipment and Outdoor Furniture at the Manara Park



6. Discussions

6.1 Observations Results

The study explored the extent Manara Park meets the needs of individuals with disabilities and the findings were analyzed in a quantitative approach and summarized in Table 1. Statistically, among 45 observations, sixty two percent (28/45) were found contradict the needs of people with disabilities, while around nine percent (4/45) partly comply and around twenty nine percent (13/45) fully satisfied the criteria for accessibility for disabled individuals.

Table 1: The extent of compliance with the needs of PwD: C-“comply”, P- “partly-comply” & N-“not comply”.

The observed items		Evaluation			Percentage of compliance
		C	P	N	
Car parking	An area designated for pick-up and drop-off	C			40%
	Specific places adhere to the parking needs of PwD.			N	
	Disabled people’s car parking is provided within 50 meters of the gate	C			
	Signposts that aid in locating designated parking spaces for PwD’s cars			N	
	A pathway, providing convenient access between car parking and the gate			N	
Gate	An inclined pathway at the main gate.	C			75%
	A curb ramp from the parking level to the gate level.		P		
Pathways	The pathways’ width is 1.8m or more	C			80%
	The pathways have a rough, non-slip surface	C			
	The pathways have a glare free surface	C			
	Tactile pavement was used to assist those with visual impairments.			N	
	The pathways’ surfaces have continuity (No obstacles)	C			
yard	Disabled individuals may easily reach the yard floor.	C			100%
	The yard floor is equipped with a surface that is resistant to slipping.	C			
Restrooms	Signage for restroom is well specified			N	0%
	Dedicated accessible restrooms for PwD in the park			N	
	The restrooms are accessible for disabled people (Area, obstacles, level)			N	
	The restrooms are equipped with grab bars.			N	
	The door of the water closet is folder, sliding or leaf door opens outward.			N	
	The clear width of WC's door is equal to or more than 80 cm.			N	
Stairs	Suitable riser /going measurements	C			38%
	The stairs have contrasting nosing			N	
	There are clear landings in all areas		P		
	There are suitable handrails			N	
	There is tactile pavement before/ after external steps			N	
Ramp	The ramp's gradient is equal to or less than 1:12.			N	15%
	The width of the ramps is equal to or more than 120cm.			N	
	The ramps provide a surface that is resistant to slipping.	C			
	Railings are installed on both sides of the ramps for users' safety.			N	
	A higher curb of at least 0.1 m tall is installed on the ramps.			N	
	The ramp includes a landing after 10m			N	
Fit	PwD can readily access the fitness facilities		P		

	The fitness facilities are usable by disabled people.			N	25%
Teleferic	Accessibility of the teleferic's floor level for disabled people			N	0%
	The teleferic's floor is resistant to slipping.			N	
	Tactile pavement is used on the teleferic's floor			N	
Play Area	Disabled kids can readily access the playground.			N	0%
	Usability of the playground for disabled children.			N	
Masjed	The place of praying is accessible for those with disabilities.			N	0%
	There are ablution facilities usable by disabled people.			N	
Seating areas	People with disabilities have easy access to the seating areas.	C			50%
	Seating areas/furniture designed for disabled people use			N	
	Accessible seating and furniture specifically intended for PwD.		P		
Theatre	Easy accessibility to ground level of the open theatre for PwD.	C			50%
	Seating accessibility for persons with disabilities at the open-air theatre			N	

Furthermore, the study's outcomes (Figure 6) reveal that despite Manara Park is not designed for disabled people's use, certain requirements were notably provided at a high rate at; the main yard (100%), pathways (80%) and the main gate (75%). Conversely, the needs of individuals with disabilities were completely overlooked in areas such as the WCs, the playground, the Masjid and the telefrik area. Additionally, requirements were considered at a low rate (between 15% and 50%) in areas such as ramps, exercise areas, seating areas, stairs, car parking and the open-air theatre.

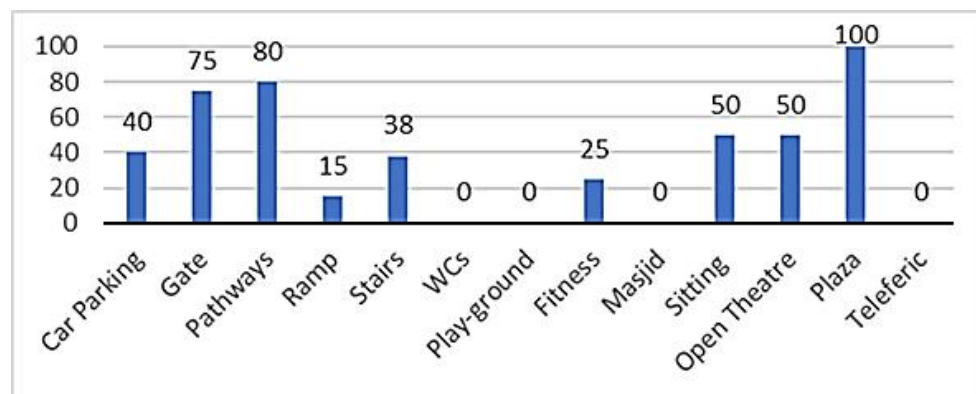


Figure 6. Percentage of Park components' compliance to disabled people's requirements.

6.2 Reasons of High Rate of Noncompliance with the Needs of Disabled People

Manara Park's high rate of noncompliance with the needs of disabled individuals is primarily attributable to the absence of mandatory Acts. There was not Acts regarding the provision of care for persons with disabilities when this park was designed and established in 2006 (seven years before issuing of the Act 38 of the official gazette, 2013). In comparison to the percentage of studying the Peshmerga park (Tarhuni, 2022) which erected in 2016 (three years after issuing the Acts), the Manara Park achieved less than 30% of the demands of disabled people, whereas around 60% of compliance was achieved by the Peshmerga Park. The improvement of the percentage of compliance to disabled people's requirements reflect the importance of the regulations in increasing awareness in designing parks. Even after the issuance of law number 38 regarding care of disabled people and special needs in Iraq (The official



gazette, 2013), the needs of PwD were not considered in regular maintenance and reparation works. This is because the Act has not been applied compulsory. Furthermore, it is neither expanded to encompass further elucidation (in terms of guidelines and codes of practice for accommodating disabled individuals on these sites) nor distributed to the relevant authorities tasked with issuing permits for such projects. This reason is supported by the director of Erbil's gardens as he mentioned that:

“Disabled people requirements were not considered, due to there are not regulations that force us to comply with it or codes to guide us. The committee of proofing the design of parks doesn't have a standard specification or criteria that can be applied. The revision of parks' design depends on personal knowledge and experience. Just we consider that the park provides pleasant views, and the percentage of green is decided by urban planner. Also, Parks' furniture and children's playground equipment should comply with the safety criteria.”

This is common in the field, as Imrie & Kumar (1998) stated that, handicapped people's demands are often not clearly expressed or taken into account when designing and developing the built environment. Additionally, the regulations that govern disabled people's access are not very strong.

The other main reason is an economic factor (Lack of funding), as the director of Erbil gardens mentioned that:

“We do not design special furniture or equipment for people with disabilities. Furniture and equipment are selected by engineers based on what is available and often are imported by companies (purchasing contract). However, when we get funding we can fix the existing problems, and disabled people will be our priority.”

Lack of money reason was repeated many times by the responsible management of parks, this triggers a question, to what extend providing disables requirements increases the cost of erection, or refurbishing parks?

7. Conclusions

This investigation comprehensively assessed the present conditions at Manara Park, highlighting the significant challenges faced by disabled visitors. It was observed that around 62% of the park's components contradict to disabled people requirements. The reason behind the high rate of contradiction can be concluded in regulations are not applied compulsory, lack of local codes of practice, and economic factor (lack of funding). Although local legislation lacks detailed implementation guidelines, it could serve as a foundation for establishing local standards. The result of this research triggers a question, to what extend disabled people's requirements increase the cost of erection, or refurbishing parks? Also, to what extent are the local landscape designers and architects aware regarding considering disabled people's requirements in their designs? The study will assist parks' administrators in addressing the specific needs of handicapped individuals when designing new parks and upgrading existing ones. The



design that adequately caters to the requirements of handicapped individuals will also effectively meet the needs of other groups, including the elderly and children. A local code of practice should be provided and architects, landscape designers and urban planners should be oriented and motivated to adhere to the needs and specifications of those with disabilities in their designs. Furthermore, the form that was used in this research for measuring the extent of complying with disabled people requirements could be applied in studying other parks. It is hoped that with proper amendments, regular maintenance, and efficient management, all parks will be friendly, safe, and accessible for all. Finally, solutions were suggested for the main obstacles that face disabled people at Manara Park.

- At least two places next to the gate should be assigned for disabled people's cars. Also, an accessible sidewalk from car-parking to the gate should be provided.
- Proper curb ramp easy to override it, should be provided for wheelchair users at the main gate.
- A tactile pavement that guides the blind persons should be provided at pathways. Also, any obstacles that hamper pedestrians' movement should be removed.
- Handrails on both sides and tactile paving at the beginning or ending of stairs that indicates the change of level should be provided.
- Existing ramp should be exchanged by a new wide ramp with gradient 1/12 or less and having handrails on both sides and a raised kerb.
- Altering the storage in the existing WCs facilities into an accessible toilet for disabled people. Its area should be enough for wheelchair users, it should include grab bars that are necessary for use by person with disability, the door opens to outside and ablution area can be added.
- Temporary ramp can be installed, and obstacle should be removed to provide accessibility for PwD to the Masjid.
- Installing some accessible equipment at play-ground to be alongside non-accessible ones. This will promote social interaction between children.
- Some fitness facilities that disabled people can use, should be positioned in proper places that can be utilized easily by PwD.
- Seating spaces and special furniture that disabled people can use, should be designed. Seats should not interrupt pedestrians' movement.
- Places for PwD at the ground of the open-air theatre should be assigned.
- A ramp should be provided for transferring from level to level at the Telefrik station. Also, non-slippery material and tactile paving should be used for flooring.

Conflict of Interest

The authors have no conflict of interest.

Author's Contribution:



“We confirm that the manuscript has been read and approved by all named authors. We further confirm that the order of authors listed in the manuscript has been approved by all authors.”

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