

Evaluation of the Urban Landscape of Sarhaldan Park in Duhok City According to Environmental Conditions, Location, Residents' opinions and Multi-Criteria

Venwar Mussa Ali

Agriculture Engineer - Duhok municipality presidency

vinwarmousa@gmail.com

Dr. Ali O. M. Sharbazhery

Prof. - Hort. Dept. College of Agri. Sci. -

Univ. of Sulaimani

ali.mohamad@univsul.edu.iq

ABSTRACT

The more cities grow and develop in all fields, including urban development, the more important gardens and parks become, until they become one of their basic components, and the need for them increases among the residents, as they are important spaces that combine psychological comfort and aesthetic pleasure, in addition to their environmental benefits. In order to evaluate the design of city parks in meeting the recreational needs and desires of visitors, it is necessary to study the design evaluation of the newly designed and currently under construction Sarhaldan Park in the center of Duhok city. Sarhaldan Park is one of the largest parks in terms of area and has a distinguished and convenient location for the city of Duhok. It is connected by several main roads to the city center and its suburbs. This was confirmed by the results of the analysis and repeated visits to the park site .

The study was conducted in Sarhaldan Park to evaluate the design of the park under construction from 15thSpt.2024 to 15thMarch 2025 with the aim of evaluating the design, its effectiveness, and its plant and physical components. In the case study field used methods to evaluate and analyze the reality of the design of Sarhaldan Park through four methods are, observations , personal interviews, questionnaires, and analysis of The research reached several results , the most important of which are: Through evaluating the proposed design by the company designing Sarhaldan Park, it was found that it is suitable for the site in terms of exploiting the topography of the site and benefiting from it for the parts and components of the park and building various entertainment activities. It also contains various entertainment activities, reaching more than 20 diverse entertainment activities that suit most of the spectrum and ages of the city's residents and park visitors, and this is what the results of the questionnaire showed, as the acceptance rate of the park design among the respondents reached 98.48% .

The list of plants provided by the design company, which includes trees, shrubs and various flowers, although suitable for city conditions, is very few in number compared to the vast area of the park, so it needs many other types.

Among the most important results of the questionnaires, it was found that the most desired activities by visitors are sitting, resting, wandering, walking within parts of the park, places for children to play, enjoying the views of the gardens and flowers, and other activities.

The research was able to provide some recommendations to several parties and proposals that can be invested in future designs for public parks and gardens in the city of Dohuk and the cities of the region.

Key words: Evaluation of the urban park design, Sarhaldan Park, Evaluation according to environmental conditions and multi-criteria.

INTRODUCTION

The first thing God created was for man to live in paradise, where he lived for a period of time until he moved to earth .Since that time ,man's need and inclination to throw himself in to change throughout the ages .Since the dawn of history, nature, with it is forests, mountains and water fall ,has been man's hone and refuge ,and in it he finds his livelihood and comfort man strives ,in the shadow of modern architecture, means of transportation and communication, to escape from all these restrictions and turn to nature with its suitable waters, towering, lush trees and blooming flowers. Since it is impossible for billions of people to leave city life, the prevailing trend is to bring all the beauties of nature and shape them in to cites in the form of gardens or parks (Jassim, 2004.(

Here the importance of parks emerges in terms of being a place to which people restore during their leisure time and a link between people and the surrounding environment as they provide psychological comfort, recreational services, the environment, and a place for cultural and social exchanging for city dwellers (Huai et al.,2022). There for public gardens and parks are among the basic components of current cites because they were not only a place for rest and tranquility in a world full of noise, but also give people the opportunity to contemplate nature (Crow,1981 and Chi et al., 2024.(

In case the cities start to developed in almost all scopes including buildings, the more the importance of gardens and parks increased until becoming the essential

accessories especially since people's necessities increased due to gardens acts as the most important spaces which are assembling the activities of psychic relaxing and aesthetic enjoyment, in addition to their environmental interest (Sharbazhery, 2009 .(

In Duhok, where cultures and traditions are diverse, these green spaces become essential to provide a place that brings people together and enhances social interaction. Parks can be a light for individuals and families, where they can enjoy outdoors and participate in various activities. Duhok City is characterized by her unique geographical location, surrounded by picturesque nature, which is a strict need for green areas.

The garden can be designed in a way that reflects local culture, such as using plants and trees that grow in the region, which helps to strengthen the city's cultural identity.

In addition, these gardens can help improve air quality, reduce noise and provide a shelter for many species of birds and animals. Studies suggest that spending time in nature can improve mental health and reduce anxiety levels. Parks provide a peaceful environment for individuals to meditate and relax, which can help decrease stress and promote mood. physical activities in parks, such as walking, jogging, or even Yoga, can also improve body health (Malek et al., 2012.(

Through my research which is on Sarhaldan park in Duhok city and its importance to the area in which it is located and how it contributes to improving the range of life for residents by providing comfortable

and beautiful green spaces, which can help build healthier and happier society.

The location of Sarhaldan park is located on a main road on (Barzani Namer) street, close to the entrance of Duhok city, and its area is about (114137 cubic meters). This project is one of the Urban parks and considered as one of the most important project to be implemented in the governorate because the city of Duhok is in dire need of green spaces and high quality parks due to being rocky area (Duhok municipality presidency, 2024).

The costs of the project is (14 billion ID). The project has large green area for resting and spending time, the presence of water bodies and dancing fountain, the presence of two entrance one of them is main entrance while another is secondary entrance, the presence of various indoor and outdoor sporting events with high specification and various sport games, the presence of large and varied gardens with walk ways and seating areas, there is a private walking way surrounding by trees, garden and flower, there are private parking spaces for the project, specialized place for open theater to make different activities (Duhok municipality presidency, 2024).

According to many previous survey researches, one of them involved a number of various relevant questions that helped the survey or to identify the problem set out in the research. Surveying also serves as a direct communication, played an important role in design studies, and accomplishes the goal completely and clearly, as well as enabled the surveyor to accurately interpret the data, and asked questions of the participants according to their educational status (Qindilgi, 1993).

The study examined the evaluation of urban park design criteria in the case of Taraqi

Park (Afghanistan, Herat), one of the oldest parks in Herat province and located on the province's main street. Taraqi Park, created between 1962 and 1965, is a central park with a size of 8 decares (8000 m²). The goal of this research is to develop park design standards, determine user expectations for parks, and evaluate the defined criteria in the case of Taraqi Park in Herat City. The study employed on-site detection, observation, and survey approaches. The park's conformance to international standards was reviewed, and general satisfaction with the park was attempted to be verified by surveys of park users. This study used literature searches, on-site determinations, observations, and surveys as data collection methods. Field analysis was conducted at the park, with on-site measurements taken. The field work's objectives include assessing the park's current state, identifying shortcomings in existing amenities, and detecting parking upkeep issues. A survey is an important instrument for increasing involvement and validating inputs collected as a result of community response activities. A survey gives both the participant (by providing open-ended opportunities to provide input to their programs and say what they have to say) and the planning person or team the most flexibility among all planned activities. This study used 250 survey forms, both online and printed. The study's goal was to get feedback from people of all ages, genders, and professions. However, due to constraints, the majority of answers were from Herat University's Faculty of Architecture and Design and Faculty of Law and Economics. The survey questions were chosen to be related to the most frequently sought thesis and case study objectives (Mohandespor and Yücel Caymaz, 2018).

Park evaluation is analyzing and assessing the quality and efficiency of public green places. This assessment includes several aspects, such as the design of the park, the quality of the functions, how well it meets visitors and the needs of the visit, and the impact of the parks on the local community. This may also include studying how the park increases social and cultural activities and its effects on the mental and physical health of visitors; the physical health benefits introduced by the Urban Park environment are abundant (Dizdaroglu, 2022). Park evaluation is of great importance as it helps to understand how people use these natural places and how they affect their lives. Through the evaluation, the strengths and weaknesses of park design can be identified, which contributes to improving the overall quality of services provided. It also contributes to enhancing social and cultural activities, in extra to improve the quality of life for local communities (Cao et al., 2022).

The types of Evaluation are: A. visitor surveys, through questionnaires given to park visitors to gather feedback on their experiences, which can include questions about satisfaction, facilities, cleanliness, and overall enjoyment of the park (NRPA, 2018). B. environmental assessments, this type evaluates the ecological impact of the park. It considers factors like biodiversity, water quality, and the health of plant and animal species in the area (Barry Salder, 1996). C. social impact assessments, how the park affects the local community. They look at social benefits such as community engagement, cultural activities, and the park's role in promoting social interactions. (UNEP, 2007). D. economic assessments, this type evaluates the economic benefits of the park, including job creation, tourism revenue, and

the overall economic impact on the local area. It often involves analyzing visitor spending and park maintenance costs (United Nations et al. 2018). E. accessibility assessments, these evaluations focus on how accessible the park is to all individuals, including those with disabilities (Van Herzele and Wiedemann, 2003). F. safety assessments, this type looks at the safety measures in place within the park. It assesses potential hazards, emergency response plans, and overall visitor safety (Wang & Zhao, 2017). G. aesthetic evaluation, this evaluation considers the visual appeal of the park. It looks at landscaping, design elements, and how well the park integrates with its natural surroundings (Jurgens, 1993 and Lothian, 1999).

Also, evaluating park plants, particularly regarding plant selection, involves several key factors that relate to the environment of the site. It involves understanding the location's physical characteristics, such as soil type, climate, topography, existing flora, temperature, humidity, rain, wind, and sunlight (Stevenson, 2002; Hansen de Chapman, 2009; Nagel, 2010 and Cheng et al., 2022).

There are two types of recreational activities in parks: Passive (flexible) activities and active activities. Passive activities which are park visitor listens and relaxes in the park, while active activities require energy and physical efforts. Passive (flexible) activities recreational activities, such as: Hunting, camping, hiking, wildlife viewing, observing and photographing nature, picnic, walking, bird watching, historic and archaeological exploration, swimming, cross-country skiing, bicycling, running, climbing, horseback riding and fishing. Examples of Active Recreational Activities: Baseball, football, soccer, golf, hockey, tennis, skiing, skateboarding,

exercise, sports games, and children's play area (Jefferson, 2006; Ransom, 2008 and Tyler and Kevin,2009.)

Research Problems

By reviewing previous research literature, doctoral and master's theses on this topic, we conclude that there is a lack of attention to this essential aspect of evaluating park designs before their implementation in the Kurdistan Region and even Iraq. Therefore, local studies on the subject are few.

Here, the fundamental research problem emerges, which can be explained as follows:

There is a lack of a clear, comprehensive, and objective understanding of the local standards and design indicators required when evaluating park designs proposed by specialized companies before their implementation. Therefore, this is the first study conducted in this area in the Kurdistan Region and even Iraq, examining the evaluation of park designs based on environmental conditions, location, resident opinions, and multiple criteria.

Objective of the study

This study aims to :

- 1 Evaluating the proposed design of Sarhaldan Park within the city of Duhok in terms of its suitability of plants and components to the environmental conditions of the site .
- 2 Knowing the weaknesses of the park design and analyzing them scientifically with the aim of correcting them at the time of implementation .
- 3 Taking the opinions of city residents about the entertainment activities contained in the park and the extent to which their entertainment needs are met and their suggestions about developing them .

- 4 The extent of application and availability of local and international standards in park design .

CASE STUDY

The study was conducted in Sarhaldan Park to evaluate the design of the park under construction from 15thSpt.2024 to 15thMarch 2025 with the aim of evaluating the design, its effectiveness, and its plant and physical components so that the park design comes out appropriately and suits the site in terms of the environment and meets the entertainment needs of the park visitors and city residents. On the other hand, the purpose of establishing a park in that designated place is to create a safe, quiet, clean, and ideal environment for relaxation for the residents of the area, make the environment more attractive and cleaner, increase the percentage of oxygen in the atmosphere, and also attract tourists. And to spend time away from the noise of everyday life.

A- Research sample and description:

The research was conducted on the site of Sarhaldan Park, which is located at the entrance to Duhok city (35° 32' N, 45° 21' E, and 605m altitude from sea level), in eastern Duhok (fig. 1), on the main (Barzani Namer) street and the main road leading to the city center, and is considered one of the large parks in Duhok city. The history of the location Sarhildan park before was place of car repair for about (50) years old approximately, the project area is 114137sqm, the costs of the project is about (4) billion dinars, the park was designed by local company North light and local engineers, as shown in fig. 2 .

This project is one of the urban parks and considered as one of the most important projects to be implemented to the Governorate because the city of Duhok is in dire need of green spaces and high-quality parks due to being rocky area, the city is in dire need of entertainment, cultural and tourism projects.

The simple topography of the site gave the project a creative aesthetic view due to its different levels (fig. 3 and 4). The project has large green areas for resting and spending time, which is the most important feature of the project, the presence of water bodies and dancing fountain and their connection to the water canal along the project along with the presence of wide green spaces provide an

enjoyable for the visitors(fig. 2), the presence of various indoor and outdoor sporting events with high specifications and various sports games, the presence of large and varied gardens with walkways and seating areas, the presence of restaurant and cafe give more vitality to the project, there is a private walking way surrounding by trees, garden and flowers, there are private parking spaces for the project. The park on the main street side will be densely planted with trees to give more beauty and act as bumpers and noise barriers and block the view of traffic and congestion of cars in the street (Duhok Municipality Presidency, 2024.)

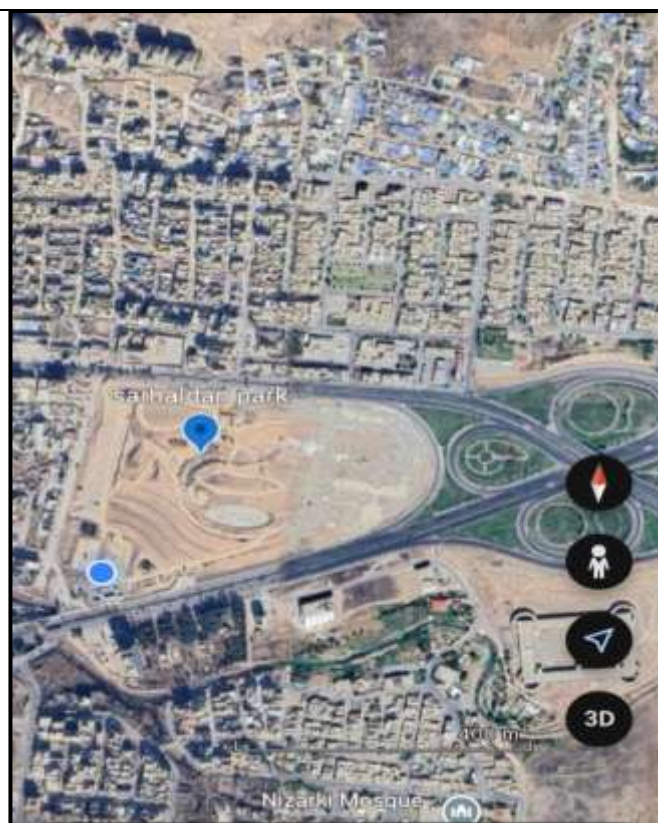


Fig. 1: Google earth map of the park
Source:(Sarhaldan park management,2024



Fig. 2: Design of Sarhaldan Park
Source: (Duhok Municipality Presidency ,2024)

**Fig. 3: Drone image of the park**

Source: (Sarhaldan Park Management, 2024)



site

(Photo by author)

Table 1: Metrological Data of Duhok (2009-2023)

Year	Month	Avg. Temperature/°C		Avg. Precipitation mm	Humidity %	Avg. Wind speed/ m/s	Sunrise
		Max	Min				
2009 To 2023	January	12.20	3.66	110.12	69.06	1.256	106.55
	February	14.29	5.12	66.72	66.46	1.166	139.64
	March	17.88	8.46	93.78	61.46	1.35	168.3
	April	23.9	12.88	60.16	53.06	1.282	220.07
	May	30.62	17.86	30.46	42.93	1.24	280.72
	June	37.05	23.07	1.08	29.73	1.23	355.84
	July	40.98	26.12	0.12	26.4	1.13	350.63
	August	40.8	25.94	0.65	26.6	1.12	288.21
	September	36.01	21.77	1.63	31.26	1.05	238.02
	October	28.76	16.49	24.46	43	1.06	183.09
	November	19.72	9.82	68.49	60.46	0.99	137.73
	December	14.86	6.03	93.21	68.46	1.15	120.31

Source: Meteorology and Earthquake Department. (2024.)

Table 3: Plants park type, quantity and its height

	Name	Quantity	Height(M)
1	<i>Brachechton sp</i>	300	3-3.5
2	<i>Capressus arizonica</i>	200	2-5.3
3	<i>Dlbarge sissso</i>	150	3-3.5
4	<i>Pinus nigra</i>	135	2.5-3
5	<i>Plantanus orientalis</i>	205	2.5-3
6	<i>Thuja orientalis</i>	184	2-2.5
7	<i>Cercis siliquastrum</i>	160	2-2.5
8	<i>Langestromia indica bush</i>	90	2-5.3
9	<i>Pinus pinea</i>	73	2.5-3
10	<i>Morus alba</i>	150	3-3.5
11	<i>Washingtonia rbusta</i>	30	3-3.5
12	<i>Albizia julibrissin</i>	60	3-3.5
13	<i>Ginkgo biloba</i>	10	3
14	<i>Cupressus sempervirens</i>	30	3-3.5
15	<i>Cupressus sempervirens</i>	15	4-4.5
16	<i>Photinia stand bush</i>	21	3-3.5
17	<i>Olea europaea bush</i>	12	3
18	<i>Olea europaea bonsay</i>	4	2.5
19	<i>Cycas</i>	40	0.70
20	<i>Yucca rostrata</i>	30	0.5-2
21	<i>Agave</i>	15	
22	<i>Myrtus hedge</i>	850	0.60
23	<i>Rose spp colorful</i>	8640	0.60
24	<i>Lavender</i>	700	0.4
25	<i>Euryops pectinatus</i>	1500	0.30
26	<i>Pennisetum</i>	1500	0.70
27	<i>Miscanthus</i>	870	
28	<i>Grass</i>	3500 m ²	

2- Analysis of Architecture Plans: The park was designed by North Light company as shown in fig (2), and the implementation period was two years. After obtaining approvals from the municipality and the designing company, a copy of the design was taken and evaluated.

Sarahldan Park consists of several parts, including:

1. Seating and resting area: Which includes lawn areas, umbrella areas, and a kiosk around the dancing fountain, containing seating and also an open theater amphitheater.

2. Walking and hiking places: Many parts of the park are used for this purpose, including the main, secondary, and wide axes and paths, and a special street for walking as in fig (5).

3. Picnic area: There are many picnic areas in the park that people will use for picnic purposes.

4. Children's play areas: There are special places in the park for children to play, and it has several types of games, as in the fig (6).

5. Dancing fountain: As shown in fig (7), there is a large dancing fountain in the park, designed in a modern and attractive design

that is consistent with the topography of the site.

6. Parking: There are two parking lots at both entrances to the park before entering the park.

7. Open theater: The topography of the site was used to create a staged theater that contains a large screen to display national events, create exhibitions, in fig (8).

8. Cafeteria and kiosk: There is a cafeteria and a kiosk inside the park.

9. Walking and bicycle street: There is a special street for sports, walking, and children's bicycles.

10. Outdoor and Indoor sports place: As in fig (9) there are indoor and outdoor sports areas that contain sports equipment for practicing sports.

11. Entrance: The selection of the entrance locations should be at the most logical, clear, and visually significant points while providing safety

12. Large rose garden.

13. Football and basketball court: In one corner of the park, there is a football and basketball court for the purpose of entertaining children and young people, fig (10).

14. Umbrella:

When you enter the park, you will find umbrellas in front of you.

15. W.C in different place of the park.

16. Plants: 2764 trees and shrubs of various varieties will be planted, 13210 types of flowers, 3500 m²

Grass as shown in the table 3.

3- Personal interviews: Some personal interviews were conducted with some people such as specialists and managers in Duhok Municipality, the Director of the Parks and Gardens Department in Duhok, the company manager, officials, designers, and the park's implementation manager.

4- Questionnaire: the questionnaire sample was consist of specialists in the municipality presidency, university professors related to several collages such as the Collage of Architecture, the Collage of Agriculture Engineering, specialists and employees in the Duhok Municipality presidency and the General Municipality in Duhok, specialists in the parks Directorate as well as samples of Duhok city residents in the neighborhoods adjacent to the park, as According to the table 4 and through the questionnaire process, 330 forms were distributed randomly to the groups we talked about with different ages and different levels of education, the number of male was about 46.97%, the number of female was 53.03%. Before distributing the questionnaire, the park design was explained in detail to each of the 330 people who filled out the questionnaire.

D- RESULTS AND DISCUSSION

1- Personal observational results:

- The park area was dirty, and they cleaned it. It was full of car residue like car oil. They removed all the polluted dirt and replaced it with clean soil.

- There are noticeable changes daily and very quickly.

- The topography of the land is well exploited as in the fig (4).

2- Discussion of Architecture design analyses

- As in fig (2) the design was well designed and professional and fit the site. The topography of the site was exploited to suit the events, as well as choosing a suitable location for the main and secondary entrances.

- The water element was used well and effectively in the form of a dancing fountain

and water channels to enjoy its views and beauty at different times of the night and day as well as for the purpose of cooling the atmosphere as fig (7).

- There is also an open theater, as shown in fig (8), that contains a large screen for the purpose of showing a football

- The space was used for children's games and entertainment with different types of games, there is also a special place for indoor and outdoor sports Fig (6).

3-Discussion of questionnaire results:

Table 4 shows a sample of responders from hotel visitors of all sexes (46.97 % of males and 53.03% of females) and the majority of these two genders have a college degree 52.73%, institute 10.91%, diploma 4.55%, preparatory 18.18%, medium 9.70%, elementary 3.94%.

Also, 98.48% of 330 people were satisfied with the design of the park and expressed their joy at creating such a beautiful, attractive,

unique and necessary park for the area designated for it, as in table(4.6) below people have their say that rest and seating areas is necessary about 99.09%, children's play areas 92.42%, walking and hiking trails 93.03%, Indoor Gym 50.61%, Outdoor Gym 60.30%, Kids bike lanes 62.42%, open theater 64.24%, Dancing fountains with music 75.45%, Cafeteria and kiosks 88.48%, Football field 46.06%, Basket ball court 52.12%, Umbrellas for rest and sitting 92.73%, Enjoy the green spaces 95.45%, Water channels 86.36%, Dense and divers forests 73.03%, Different flower beds to enjoy their beauty 92.42%, Enjoy the beautiful scenery 94.55%, A pool of water for the purpose of enjoying the view and sitting around it 84.24%.



Fig. 5: Path way

Source: (Duhok municipality presidency, 2024)



Fig. 6: Children play area

Source: (Duhok municipality presidency, 2024)



Fig. 7: Dancing Fountain.

Source: (Duhok municipality presidency, 2024)



Fig. 8: Open Theater

Source: (Duhok municipality presidency, 2024)



Fig. 9: Outdoor and indoor fitness

Source: (Duhok municipality presidency, 2024)



Fig.10: football and basketball court - (Photo by author)

Table 4: Gender, Academic achievement

Gender		Academic achievement					
Male	female	Elementary	Medium	Preparatory	Diploma	Institute	Collage
46.97 %	53.03%	3.94%	9.70%	18.18%	4.55%	10.91%	52.73%

Table 5: Park parts and the people's opinions on the questionnaire form**Do you think it is necessary to have these activities in the park design?**

Parks part	Necessary	Unnecessary	To some extent
1- Rest and seating areas.	99.09%	0.61%	0.30%
2- Children's play areas.	92.42%	1.82%	5.76%
3- Walking and hiking trails.	93.03%	2.73%	4.24%
4- Indoor Gym.	50.61%	28.18%	21.21%
5- Outdoor Gym.	60.30%	19.09%	20.61%
6- Kids bike lanes.	62.42%	21.82%	15.76%
7- Open theater	64.24%	16.67%	19.09%
8- Dancing fountains with music.	75.45%	9.70%	14.85%
9- Cafeteria and kiosks.	88.48%	5.15%	6.36%
10- Football field.	46.06%	31.21%	22.73%
11- Basketball court.	52.12%	26.36%	21.52%
12- Umbrellas for rest and sitting	92.73%	3.33%	3.94%
13- Enjoy the green spaces.	95.45%	1.52%	3.03%
14- Water channels.	86.36%	6.06%	7.58%
15- Dense and divers forests.	73.03%	8.79%	18.18%
16- Different flower beds to enjoy their beauty.	92.42%	2.73%	4.85%
17- Enjoy the beautiful scenery.	94.55%	3.03%	2.42%
18- A pool of water for the purpose of enjoying the view and sitting around it.	84.24%	6.06%	9.70%

E-

.1Sarhaldan park has a unique and convenient location and area for Duhok city, and several main roads connect it to the city center and its suburbs. It is one of the largest parks in the city at the present time.

.2Removing the industrial areas within cities and converting them into parks is one of the important things in reducing environmental pollution. Sarhaldan park is one of the most beautiful examples in Duhok city.

Conclusion:

.3The steps to establish the park are being carried out in a scientific and sequential manner by removing construction and industrial waste and removing part of the contaminated soil from the site and replacing it with agricultural soil mixed with organic matter in appropriate proportions.

.4Through the analyses and evaluation of the proposed design for Sarhaldan park, it was found that it is suitable for the site in terms of exploiting the topography of the land and benefiting from it for the parts and

components of the park and the needs of recreational activities.

.5The proposed park design features a variety of entertainment activities, reaching more than twenty different entertainment activities, which may suit most of the spectrum and ages of the city's residents and visitors, and this is what the questionnaire showed, as the acceptance of the park design reached 98.48% of the city's resident who responded.

.6Analysis of environmental elements data for Duhok city indicates that there are significant

differences between temperature, humidity, and other elements during the seasons, which makes it difficult to provide thermal comfort for visitors inside the parks according to the seasons.

.7According to the survey results, the most desired activities in the park are sitting, resting, walking, playing in places for children, enjoying the garden views, gardening flowers, and other recreational activities.

F-

This recommendation presented by this research in the field of evaluating the design of Sarhaldan Park in Duhok city according to the opinions of residents and environmental factors within local and international standards, with the aim of identifying the design's weaknesses before implementation, in the light of the evaluation results, as follows:- Having an entrance on three sides.

-Good supervision to keep the park clean.

-Have the indicators for the purpose of preserving the environment.

-Place of prayer.

-The presence of the symbol in the park indicates the name of the park.

-Special place for the elderly and disabled people.

-The presence of markets inside the park.

-It is better to make the seats from iron.

-Fences surround the park.

-A special place to teach children in the summer .

-Planting trees that are related to the environment of Kurdistan.

-Using clean energy to obtain electricity, such as solar energy and wind energy.

Recommendations:

-There are games for adults and children in the winter.

-Having music with plants like the gardens of neighboring countries.

-Tower for warning purpose.

-There is a special place for reading and studying.

-Opening an exhibition to display foreign markets.

-First aid.

-Sand place for children to play.

-The presence of seating that contains mobile chargers so that it operates on clean energy.

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Appendix 1 – Questionnaire

Tick the suitable answers or give the right phrases:

Q1/: Sex: , Age: , Academic achievement :

Q2:This is the design of Sarhaldan park as shown in the picture, in general do you like the design first? Yes () No.()

Q3: Do you think it is necessary to have these activities in the park design

Parks part	Necessary	Unnecessary	To some extent
1- Rest and seating areas.			
2-Children’s play areas.			
3-Walking and hiking trails.			
4-Indoor Gym.			
5-Outdoor Gym.			
6-Kids bike lanes.			
7-Open theater			
8-Dancing fountains with music.			
9-Cafeteria and kiosks.			

10-Football field.			
11-Basket ball court.			
12-Umbrellas for rest and sitting.			
13-Enjoy the green spaces.			
14-Water channels.			
15-Dense and divers forests.			
16-Different flower beds to enjoy their beauty.			
17-Enjoy the beautiful scenery.			
18-A pool of water for the purpose of enjoying the view and seating around it.			

Q4: Would you like to have these events?

Events	Better	No better	To some extent
1-A place to read and study			
2-Special place for families to sit			
3-A special place for the elderly to sit and gather			
4-Family party and birthday venue			
5-Outdoor pool			
6-Indoor pool			
7-Aqua park			
8-Golf			
9-Museum			
10-Cable car			
11-Statues and sculptures			
12-Bird and butterfly garden			
13- Presence of restaurants			
14-Outdoor fitness			
15-The presence of sanitary facilities and bath rooms indifferent place			

Q5: How do you like to get to the park? With your own car () Walking() Any other means of transportation.()

Q6: Do you have any other additions or suggestions to enrich and develop the design of Sarhaldan park? Please write :

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B-

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C -

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With the researcher's appreciation

A-

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