

Chapter 25

Urban and Architectural Sustainability in the Restoration of Iranian Cities (Strategy and Challenges): Case Study of Soltaniyeh



Nazila Khaghani

Abstract Urban sustainability is a widely used term, and to help to refine and define the term in the context of this study, one can refer to the basic principles that are widely known from the 1987 Brundtland report: “Humanity has the ability to make development sustainable – to ensure that it meets the need of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987). The exclusive architecture style advent in Soltaniyeh Zanzan, in the wake of the construction of the glorious Soltaniyeh dome (one of the most colossal brick-made buildings in the world), the rampart of the city, and other historical buildings happened in the region of Oljiato (one of the Mongol chieftains). In the field of improving the quality of the historic urban landscape of Soltaniyeh to become a sustainable city, the role of the World Heritage sites as a significant factor in improving the quality of historical urban landscapes is emphasized. For this purpose, field study and analysis of documents, especially with consideration of the UNESCO 2011 recommendation in the analysis, of a part of the landscape surrounding the dome is the method of this inquiry. The strengths and city potentials of this town are identified with its expansion to the Soltaniyeh’s historical urban landscape. Social human activities, visual effects, access routes, farms and partitioning the farmlands, irrigation systems, historical sites, buffer zones for historic areas, and also liability to create spaces, are covered here.

Soltaniyeh is a region unique to Iran and even the world, which unites historical, cultural, and natural values. Soltaniyeh Historical Sites, as one of the few remaining works of the Ilkhan civilization, include the work of the World Heritage Sultanate Dome and other valuable historical and natural elements adjoining it, especially the

N. Khaghani (✉)
University of Florence, Florence, Italy
e-mail: nazila.khaghani@unifi.it

Soltaniyeh Historical Grass. In recent decades, unsustainable urban development has caused some issues and visual and environmental anomalies in the urban landscape, which has been criticized by some historians, and cultural influences. In this chapter, while presenting the results of research on improving the quality of the historical urban landscape of Soltaniyeh, the importance of the global impact as a matter of quality improvement has been demonstrated in the context of urbanization. Therefore, the issue of information and communication, especially the inclusion of the 2011 UNESCO descriptive-analytical review, is part of the historical perspective of Soltaniyeh. In this case, the concept of the historic urban landscape and its constructive approach have been examined first. Then, by expanding it to the historic city of Soltaniyeh, the social-human activities, the visual effects of the environment, the quality of the network of existing roads, the fields and their network, its blueprint, the historical centers, the areas of protection of privacy, as well as the integration and activation of the site as the most important determinants of the world-class resilience of this concept, are identified. The final result of the research emphasizes the elements in relationship to historical urban monopoly, integrated as a form of identity and value.

25.1 Introduction

The land of Iran, with its wide area, has many examples on the historical record of global registration, which emphasizes the relevance of these effects on the livelihood of the land and the importance of this land. According to the definition of outstanding universal value, each of these works has unique characteristics from the time of human history, which reflects the evolution of human society and the residence of human beings over the course of time (Farredanesh 2010: 20). Valuable historical works, especially the effects of Universal Recording Architecture, have created a series of deep links to the surrounding area, which is impossible in one aspect, regardless of other facets. Thus, they are interconnected as one-body components, and this should be in perspective to preserve the life and lives of these works.

The surrounding area comprises these works, as well as the buildings themselves. In the case of the Soltaniyeh dome complex, it should also be noted that from the beginning the dome of the building was not created in isolation, but in a solid and beautiful bond with the collection of buildings and the natural surroundings. Soltaniyeh's dome is more important than paying attention to the Soltaniyeh Historical Grass very near the dome and the Soltaniyeh citadel. On the other hand, the existence of important historical, tourist, and cultural centers such as the ancient Hills of Light, the tomb of Kashan Kashi I, and the Khangah Chalipi Oghli, more than 700 years old, have placed the importance of Soltaniyeh's area in the domain of the dome, emphasizing the improvement of urban landscapes on this global site. In recent years, Soltaniyeh's general appearance has gradually changed as the result of contemporary developments and expansion. Inappropriate development,

especially after the liberation of the citadel from the sub-district of contemporary Soltaniyeh in the early 1960s, has also led to the general appearance of the city in the wake of the Great Soltaniyeh World as a world heritage site and one of the largest brick domes worldwide, and some of the unique historical and natural capabilities of this city are threatened. The research questions are as follows:

1. What is the most important aspect of the 2011 UNESCO Recommendation on Historical Urban Landscapes and which elements of Soltaniyeh's historical metropolis?
2. What are the main needs in the process of development and landscape planning of the Soltaniyeh Historic Site? What about the historical axis between the Soltaniyeh dome and the grave of Molla Hasan Kashi?

The main purpose of the research and its results presented in this chapter is to identify the main building blocks of the historical urban landscape around the Soltaniyeh dome (especially the axis of the border between the Soltaniyeh dome and the grave of M. Hasan Kashi) based on UNESCO Recommendation 2011. This review and analytical-comparative study provide a means of paying attention to the diverse aspects of urban landscapes in the perimeter of the global influence of the Solomon's dome.

25.2 Research Methodology

The research was carried out on the basis of the descriptive-analytical method to determine and evaluate the most important elements of the historical urban landscape of Soltaniyeh. The area under consideration is the southern part of the city of Soltaniyeh, especially the axis of the border between the Soltaniyeh dome and the tomb of Hasan Kashi. In this chapter, first, the components of the historical urban landscape are explained; then, with their adaptation to the sampling, the architectural elements of the historical city of Soltaniyeh in the southern parts of the city are identified and studied, which provides part of the desired output in the form of tables and drawings. The need has been identified. Analysis of these natural, historical, and cultural elements has taken place with regard to reasonable documents such as library resources, aerial photographs, maps, Cultural Heritage Organization reports, the Soltaniyeh dome record book, and the laws, documents, and global recommendations on the past and present status of the site.

25.3 UNESCO Recommendation 2011 on Historical Cities

Following the discussions on the urban project for the development of the Wienmitte Railway Station in Austria at the 27th Paris Summit in 2003, the World Heritage Committee decided to convene a conference to discuss "the need for modernization"

of historic towns with the cultural aspects of their heritage and their values. For this reason, in 2005, the World Heritage Committee hosted the “Vienna Memorandum” conference on the subject of Urban Historic Landscape Management in Vienna. The recommendations of this conference are the first guideline to address the issue of improving the coherent communication between preservation of historical cities and new developments for the preservation of the integrity of urban landscapes (Riahi Moghadam 2012). A series of specialized meetings of the World Heritage Committee and its colleagues, held from 2006 to 2010, eventually led to the establishment of a credible UNESCO Recommendation document in 2011, which provided an exact definition of the historical urban landscape and its constituent elements to provide guidance and useful policies and practices available to planners, policymakers of historical cities, and more officials of the World Heritage Site.

25.4 Urban Landscape and Historic Urban Landscape Layers in the 2011 UNESCO Recommendation

In most theories and definitions relating to the human relationship and the urban environment surrounding it, much emphasis has been placed on the natural and social components. For example, in the field of urban design, the model can be “components of quality: urban design,” which includes three main aspects of functional qualities, experimental qualities of aesthetics, and environmental quality of the site (Golkar 1378: 51). Also, in the field of theoretical foundations, landscape architecture is a model of the values of social, environmental, and economic environment; their interaction is presented [5]. In the model presented for the elements of landscape design, a comprehensive ensemble, elements of human artifacts, and elements of the natural environment and human resources have been introduced as the main characteristics of the landscape constructor (Taghvaei 1391: 135). The 2011 UNESCO Recommendation focuses on the definition of a historic urban landscape, focusing on all aspects of city-specific artifacts, the natural and social dimensions. In this definition, the historical urban landscape is a city boundary that is understood in the wake of historical layering, values, and cultural and natural characteristics, which concept is beyond the understanding of historical centers and collections, and it also encompasses the landmark of its geographic landmarks (UNESCO [9]: article 8).

The scope of this platform includes the topography and gradient of the earth, the morphology of the earth, hydrology and natural phenomena, the historical and contemporary art environment, landscape infrastructure, open spaces, land use patterns and spatial organization, visual perception and communication, and other elements of urban structures. It also includes social and cultural behaviors and the values, economic processes, and other issues related to the heritage’s diversity (UNESCO [9]: article 9).

It should be noted that the historic landscape includes a wide variety of residential buildings and areas that are deeply connected with their natural, artisanal, and social surroundings. The term “historical depiction” indicates the existence of the factor of time in this concept and the study of the components that make up the historic urban landscape in time, so that the slow and steady changes that make it evolve have been taken into consideration. Therefore, understanding the city or part of the city as the result of natural, cultural, economic, social, and spiritual processes is considered (UNESCO [8]: 14).

The historical landscape approach seeks to improve the quality of human environments. Therefore, the definition of a historical landscape highlights the wide range of influential components in understanding or shaping the historical urban landscape by emphasizing the importance of value relationships as much as physical relationships.

According to the eighth recommendation of the Recommendation and based on the definition from the historical point of view, two main layers of natural attributes and cultural features are identifiable. Part IX is a component of this main line, in which, by combining these factors, the historical point of view can be understood. Therefore, if any of the components has a problem or a pest, its negative impact on the entire set is visible. From the compatibility of these components with the model presented by the elements of landscape design, charting can be delineated that identifies the most important historical urban landscape layers with emphasis on the characteristics of the natural environment, artifacts, and human activities.

25.5 Soltaniyeh as an Historic Urban landscape

In the context of the global heritage of Gonbad-e-Soltaniyeh, the importance of the site is that “the planning of the main and ancient city of Soltaniyeh has been based on the satisfaction of the natural and social needs of the international community. Soltaniyeh is a rare and unique example of a complex architecture related to its perimeter landscape, which combines the needs of the nomadic people (Mongols and their successors) as well as the unicamous people (Iranians).” This collection meets the standards of the World Heritage Committee. With respect to the outstanding global values of Soltaniyeh, three criteria (second, third, and fourth) of the six criteria set in 2005 have been recorded. The city of Soltaniyeh is one of the examples where the numerous historical monuments of the city have been linked with natural life and social events, natural monuments, and natural values. In general, the landscape of this city consists of four main aspects: urban landscapes, ancient and historical monuments, farms, and the Historical Grass of Soltaniyeh (see Fig. 25.1).

Historical works and ancient sites are scattered around the inner city and its margins, and fields and natural landscapes are located around the city and the city of Baghdad. The status of the geographic area of the area has created a natural texture

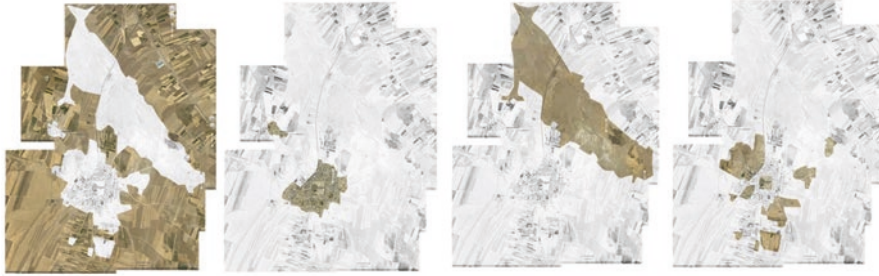


Fig. 25.1 Four main monuments of Soltaniyeh, from the right: historical monuments, Historical Grass of Soltaniyeh, the contemporary city of Soltaniyeh, and the surrounding countryside. (Source: Archives of the Documentation Center of the Dome World Base, Soltaniyeh, mid-1980s)

with an open and horizontal skyline such that, because of its flatness and the lack of physical effects, the Soltaniyeh dome is visible from all parts of the city and even miles away (Sobooti 1369; Kiani 1374). In the UNESCO Recommendation 2011 criteria and library and field reviews, the main aspects of Soltaniyeh's historical urban landscape are identified and classified according to the third charts. According to the studies and questions about the most basic needs in the development of the historic urban landscape of Soltaniyeh, identifying issues and damage in the urban landscape, especially issues related to the natural environment and the environment of the artifacts, and the human-social activities in the study area, are presented next.

25.6 Soltaniyeh Historical Urban Landscape Pathology in the Study Area

Despite the importance of dignity and despite all the efforts and approaches that have been developed in recent years in the development of tourism, the protection and identification of important historical and cultural influences, after the registration of the Soltaniyeh dome on the UNESCO list, the city is still built as is, and the need has not been addressed. The target axis of the research is located in the south of Soltaniyeh Dome and is about 2.5 km long at the grave of M. Hasan Kashi, the poet, and the world of the thirteenth century (Figs. 25.2 and 25.3). The main aspects of field studies and library studies are presented here. The landscape quality of the urbanization focuses on the study in a tabular format, which provides a summary and review of the overall problems of this city. Full discussion of the pathology of the city of Soltaniyeh on a large scale does not fit into this chapter; only the damage of Soltaniyeh's perspective in the Solarmatian Dome is addressed.



Fig. 25.2 The axis between the tomb of Hasan Taki and the Soltaniyeh Dome. (Source: Archives of the Documentation Center of the Dome World Base Soltaniyeh, mid-1980s)



Fig. 25.3 The top of the Soltaniyeh Dome and the tomb of Hasan Tile in the southern part of the city. (Source: Author 2017)

25.7 The Most Important Historical Sites of Soltaniyeh in the Study Area

25.7.1 Perception and Visual Aspects

Environmental perception is the process by which a person receives data and mental perceptions from the surrounding environment. Also, perception can be considered as a goal-oriented process in which one receives environmental transmissions based on the culture and values that govern human societies. Perception of the environment is associated with human recognition of the environment, and based on this, the result is the interaction of sensory perception and cognition. Visual values as the most important part of environmental quality contribute to the strengthening or weakening of the sense of place of individuals in their environment. This phenomenon has a major role in the identity and desirability of the place or, ultimately, society, which has a constructive effect on the economy of its place and its tourist destination. The axis between the Soltaniyeh dome and the tomb of Mullah Hasan Kashi is in the northern part of the city, and in the south the section passes through the farms. The southern part of the route has landscapes that look like vast plains. The different portions of this route create different images that, despite the heterogeneous texture of the city's margin, progress toward the city of Soltaniyeh. The best known landscapes are outside the city, and the most inappropriate sites are from outside the city to the city's fringes. Understanding the appropriate visual effects allows for the proper placement of the activities of the observatory, as it relates to the historical urban landscape.

25.7.2 Network of Roads

In the southern part of the city of Soltaniyeh, there is a border between the dome and the grave of the Hasan Taki, the direct route (Mullah Hassan Street), which connects the two buildings and is now connected with ordinary machinery and agricultural machinery, and is also used by pedestrians and livestock on the sides of this route and across the agricultural land.

In the soil paths to the hills of the valley and the lands of the east can be seen the comparison of the routes in the aerial images and existing maps of the city from the Safavid era, known for their historical dating. These pathways, which are based on the ability of each person to be built as a function of the site and historical background, can be used by planners to access other ancient historical sites and agricultural lands.

25.7.3 Farms and Gratings

A large part of the land around the city of Soltaniyeh is farmland, located in the south of the city, on the two sides of the Mullah Hassan Tile, which is a regular tourist destination in different months of the year. These lands are considered to be agricultural landscape as one of the main infrastructures forming the natural landscape of this city and are now used by farmers. Based on the findings of this study, by recognizing and strengthening the networking of farms, the use of these routes (to a limited extent) for those who tend to naturalize can improve the natural and agricultural landscape along the shores of the mainland. However, the mode, the corresponding paths, is not only the labeling of farmers' activity but can also be a guarantee of a risk to the lands. The tourism attraction is called the farm area.

25.7.4 Water Network

Soltaniyeh has a desirable position regarding the status of groundwater resources. Also, the existence of underground waters and the geological status of the area is one of the most important factors in the appearance of the massive and long grass of Soltaniyeh's Historical Grass. Understanding and improving the current status of the water resources of the region is important as a vital infrastructure for the survival of natural landscapes. Use of existing reservoirs will create sustainable methods in line with the traditional practices of the region in using water resources for agriculture. In the area of the periphery of the city and the landscape, proper understanding of the aqueducts of the aquifer in relationship to the farms is needed to prevent damage to this network that is not avoided by irresponsible design. By installing the blue water network and plotting the network of the farms, plots that are located on the separator responsible for water supply to the land are also identified. The surroundings of the farm are not involved.

25.7.5 Positive Positions for Spatialization and Deployment

The status of human factors in the area, activities in the course, places suitable for positioning, gradient of the earth, proximity to the paths, and the current use of the existing paths are identified. It is necessary for these temporary files to include a number of functions that, while guiding and improving the activities of the present visitors, will make the historic personality of the site possible and can be eliminated (Australia ICOMOS [3]:6).

It should also be noted that the location of spatial and landing applications, such as the location of the site, results from the nature of the activity, the amount of acceptable and suitable distance for the individual, the type of land ownership, and

the activity in the region, as well as all the results of the review of the human and social activities of the contacts.

25.7.6 *Historical Centers*

The city of Soltaniyeh, on the other hand, has a number of other historic and valuable architectural monuments, located a little further than the dome. According to the docket of the Soltaniyeh Dome, these works include the citadel, the tower and its barracks, and the remnants of the interior of the citadel in the Bella dome area as parts of the buried Ilkhani, the ancient mosque of Allameh Helli in the citadel, the tomb of Molana hasan ibn Mahmud Kashani Amoli, known as Hasan Kashi, 2.5 km south of Soltaniyeh, the Chelpy Oghli Tomb in the southwest of Soltaniyeh Dome, the remains of the Ghazan Khan dome, the light trap on a large hill 1.5 km south of Soltaniyeh Dome, and the remains of workshops for pottery and bricks in the east of the mausoleum of Mullah Hasan Kashi, a group of Mahoori Mountains located 2.5 km southwest of the city Soltaniyeh known as the hangar, the far hill, the far emamzadeh, the Fenjanabad lands, the lands of the crewmen northeast of Soltaniyeh, the three-hill area near the caravans, and the hills of the castle and lands of Mustafa Khan in the middle of the Historical Grass of Soltaniyeh (ICHHTO [1]:22–26).

25.7.7 *The World Heritage Site*

Various studies have been conducted on the protection of the world's heritage and related issues. These ranges, depending on the type of effect, and its areas, have different public and private norms to protect the text. In UNESCO World Heritage Centre [7], because of the importance of the Gonbad Soltaniyeh, there are certain criteria for the observance of the statue of the site by the Cultural Heritage Organization to be considered. According to the approved plan of the country's archeological and cultural heritage in 2005, in the scope of vision and landscape, any developmental activity and physical organization should be carried out by the supervision and approval of the Cultural Heritage and Tourism Organization. These protective laws include general points about the scale, height, type of use, and constructive materials that alone are not sufficient, and thus provide many safeguards based on issues available on each site individually. Hence, to achieve the location of tourism spaces and their type in the limited range, the study and recognition of land ownership is of particular importance. Therefore, on the basis of the implementation of the hermitage of the province and of the spatially functional areas, the information is to be provided by the designer.

In this regard, it is necessary to carefully consider the height of the elements to be considered; under the southern part of the city, there are extensive agricultural fields, which, apart from several small tree communities, have no other vertical element.

25.7.8 Social and Cultural Behaviors and Values

As mentioned, according to the eighth recommendation, social and cultural behaviors and values should be considered as one of the components of the historic urban landscape. Soltaniyeh is a city with historic works and historic sites that have been linked to the daily routine of the city with its historic landscapes. The multitude of people affected by each location affects their affiliation. As more space is experienced, it will be more dependent on the general concepts and place meanings. In general, social and cultural behaviors and values have a range of components that are composed of several factors. Social value includes the qualities on the basis of which each place of the spiritual, national, or other cultural affinity has for a group of the majority or becomes a minority.

This range includes many valuable processes and funds that are considered to be the distinction of that community. In fact, "the historical urban perspective approach learns from local communication traditions and perceptions, while responding to the value of national and international communication."

In the study of the social behaviors and values of Soltaniyeh, the knowledge of the audience of this city is of inestimable importance. Cities with historical values include a wide range of individuals and groups each with their own activity patterns and needs. To categorize these groups, it is possible to separate Soltaniyeh's audience into three groups that include people living in the city, visitors, and tourists. The human and social activities of the audience are as follows.

25.7.9 Summarizing Through Layouts

Based on analytical-comparative analyzes, the most important components of the architectural monument of the historical city of Soltaniyeh are located in the three main areas: the natural environment, the artificial environment, and human-social works. Each of the components is one of the components considered as the constructive layers of the historical observation of Soltaniyeh were placed. It is necessary to consider each in the process of development and planning to improve the historical perspective of the city of Soltaniyeh, because based on the principles of the UNESCO Recommendation 2011, in terms of the historical urban landscape, these layers together, and not individually, form the entire urban landscape as an integrated identity and value. Therefore, in examination of the suburban departments in the southern parts of Soltaniyeh, it is also important that this layer be examined for the mutual effects that they create on each other. When the effect of the grapevine is evaluated in other respects, the role of each component becomes more intense and will be reinforced as the existing capabilities of the region. In this way, the factors and parts that exacerbate or weaken the effects of each other are identified, and the program for the expansion and development of this urban landscape is based on the identified features and the planned constraints.

25.8 Conclusion

The city of Soltaniyeh has unique characteristics that must be considered to know the components of its historic urban landscape. The removal of the ancient city of ancient times, amidst the urban environment and the everyday life of people, has a strong interaction with nature and the natural phenomena of selfishness. In this regard, the comparative analysis and analysis of components from the historical urban perspective in the UNESCO Recommendation 2011 and other conservation texts with a historical urban landscape of Soltaniyeh in the southern part of the city showed that three areas of the natural environment, the artificial environment of mankind, and the social processes and human beings in this city should be taken into consideration. Based on the separate studies provided in this essay, the most basic features of the city's southern harbor include community-based social activities shaped by visitors and locals, and the visual effects of the environment. The city is marked by its location on the south side of the city, the water network, the historic centers, the privacy protection rules on the effects of the World Heritage domes of Soltaniyeh and other ancient sites inside and outside the city, as well as the positions of space and activity. The exact recognition of these funds is as it lies. The architectural perspective of the historic city of Soltaniyeh, their mutual effects on each other, as well as improvement of the quality of the present situation, will provide a basis for improving its quality and preserving the survival of this valuable world-wide site.

The most important developmental needs of the Soltaniyeh historical monument are considering all the components of this landscape. To understand and analyze the historical perspective of the city of Soltaniyeh (the emphasis is on the southern parts of the city), it is necessary to consider the effect of the global registration of Soltaniyeh domes with the protection of their surroundings as a single unit, not individually. This requirement implies that mere consideration of the area as peripheral is not enough, and that all aspects of the artificial environment, the natural environment, and the social-human activities of this area are also to be understood and arranged in planning and development.

References

1. ICHHTO (2005) Inscription Dossier for Soltaniyeh. Tehran. Retrieved September 2012, from: <http://whc.unesco.org/en/list/1188>
2. World Commission on Environment and Development (1987)
3. Australia ICOMOS (1992) The illustrated Burra Charter. Australia ICOMOS, Sydney. Retrieved September 2012, from: <http://australia.icomos.org/publications/charters>
4. Thompson IH (2005) Ecology, community and delight. Taylor & Francis Group, London
5. UNESCO World Heritage Centre (2009) World heritage papers 25, world heritage and buffer zones. Netherlands and Paris: UNESCO World Heritage Center. Retrieved February 2012, from: whc.unesco.org/en/series/25/

6. UNESCO World Heritage Centre (2010) World heritage papers 27, managing historic cities. Netherlands and Paris: UNESCO World Heritage Center, Retrieved February 2012, from: whc.unesco.org/en/series/27/
7. UNESCO World Heritage Centre (2011) Recommendation on the historic urban landscape. Paris. Retrieved December 2012, from: http://portal.unesco.org/en/ev.php-URL_ID=48857&URL_DO=DO_TOPIC&URL_SECTION=201.html