

# The Threatened Historic Urban Landscape and Land -Use Planning for the Derevenk Valley in Kayseri, Turkey

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**Abstract:** Throughout the world, particularly in valley areas, urban development and expansion pose a threat to historic urban landscapes. The relationship between historic cultural landscape and current land-use planning was investigated in the city of Kayseri in Turkey, in order to design a sustainable land-use plan. The metropolitan municipality of Kayseri initiated a development plan and land-use planning programme in the area in about 2000s. However, this may not be sufficient to prevent pressure from urbanisation. The official development plans depicting the valley and historic towns and the growth scenarios were reviewed. In addition, the historic urban landscape approach was applied to suggest compatible and sustainable uses. The methodology of the research encompassed an analysis of the literature, statistical data, planning documents and the analyses on site. The results showed that the current urban development process is at a critical stage in which urban and peri-urban areas are facing unprecedented stress on land resources. Based on these results, a series of recommendations, including the conservation and restoration of the cultural landscape, and future growth scenarios were considered.

**Keywords:** Urbanisation; Land-use plan; Historic urban landscape; Sustainable neighbourhood; Derevenk Valley; Turkey

## 1. Introduction

In recent decades, the landscape of cities has changed significantly because of current urbanisation challenges such as population growth, urban sprawl, poverty, inequality, pollution, and congestion, as well as urban biodiversity, high car dependency, low density and high segregation of uses. UN-Habitat [1] proposes a new approach for countries, particularly those with rapidly growing cities, new urban settlements, and declining cities, to develop a sustainable relationship between urban dwellers and urban space, and to increase the value of urban land. This approach which supports the concept of the “sustainable neighbourhood” is based on 5 principles.

- To provide an interconnected network of streets specifically for pedestrians and cyclists, to encourage walkability in a neighbourhood and to reduce car dependency,
- To promote high density urban growth and to alleviate urban sprawl,
- To develop a range of compatible activities and land uses in appropriate and close locations,
- To promote the cohesion and interaction between different social classes living in the same community and to provide different types of housing and lot sizes,
- To limit single function blocks or neighbourhoods.

The core concept of mixed land use promoted by new urbanism is acknowledged as a pillar of sustainable urban development which is in contrast to the 19th century’s modern urban planning concepts suggesting single-use zoning strategies. Essentially, the principles of social mix and mixed land use promote each other. A mixed land-use neighbourhood, which is a combination of residential, commercial, industrial, office, or other land uses,

creates local job opportunities for residents from different backgrounds. In addition, it reduces car dependency and traffic congestion and provides accessibility to public services. In urban renewal and renaissance programmes for declining historic sites - whether cities or towns - application of the five principles of sustainable neighbourhood is recommended for revitalisation and urban transformation initiatives [1].

In 1976, the “UNESCO Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas” defined the historic urban landscape as “ensembles of any group of buildings, structures and open spaces, in their natural and ecological context, including archaeological and paleontological sites, constituting human settlements in an urban environment over a relevant period of time, the cohesion and value of which are recognized from the archaeological, architectural, prehistoric, historic, scientific, aesthetic, socio-cultural or ecological point of view” [2]. However, structural interventions and high-rise buildings in the inherited historic urban landscape have resulted in tension in the form of strong urban development pressure, and have had negative virtual impacts on traditional cityscapes. Consequently, the conservation of historic urban landscapes has become one of the most urgent and difficult challenges in the field of heritage conservation in an era of rapid urbanization.

Worries about the construction of high-rise buildings in the vicinity of heritage sites and haphazard urban developments within or just outside the buffer zones have forced experts to discuss the urban development problems in heritage cities. Thereafter, the conference titled “World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape”, which was held in Vienna, Austria, in 2005, described the historic urban landscape as “composed of character-defining elements that include land uses and patterns, spatial organization, visual relationships, topography and soils, vegetation, and all elements of the technical infrastructure, including small scale objects and details of construction (curbs, paving, drain gutters, lights, etc.)” and “townscapes, roofscapes, main visual axes, building plots and types are integral parts of the identity of the historic urban landscape” [3].

At this point, the vital issue was to discover how historic cities are dealing with the continuous and large scale changes arising from urban development adjacent to heritage sites. In 2005, the general assembly of ICOMOS issued the Xi’an Declaration on the Conservation of Setting of Heritage Structures, Sites and Areas which proposed to manage “the change of the setting, while avoiding inappropriate visual and spatial encroachments or land use in significant setting” [4]. Finally, in 2011, the UNESCO Recommendation on the Historic Urban Landscape defined the concept of “historic urban landscape as the result of a historic layering of cultural and natural values, and attributes, extending beyond the notion of “historic centre” or “ensemble” to include the broader urban context and its geographical setting”. It provided a landscape-based approach including all elements of the urban structure such as topography, geomorphology, hydrology, natural features, both historic and contemporary built environment, the intangible dimensions of heritage etc. [5].

Yet, interestingly, the development of sustainable neighbourhoods and historic cities which maintain and review their historic urban landscape overlaps on the same issue of land use. All these conditions are met in Kayseri, Turkey, one of the major commercial and industrial centres and most populated areas of Anatolia, which is located on the south of the Kızılırmak River. This paper aims to focus on the Derevenk Valley, which houses natural and cultural heritage sites, on the outskirts of Kayseri metropolitan city. Although they are included in the metropolitan municipality region, the historic towns and landscapes are in the process of having their historic properties and identity transformed. The objective of this paper is to evaluate the relationship between current land-use planning decisions and the historic urban landscape of the Derevenk Valley, according to the sustainable neighbourhood approach. Methodologically, the research used an analysis of the literature, statistical data, planning documents and also analyses on site in order to evaluate the current land uses and recommend sustainable uses for a sustainable neighbourhood. Specifically, the paper will describe the study area and its importance in terms of the metropolitan city; secondly, it will introduce the planning documents related to the conservation of the heritage and urban development of the valley; finally, it will discuss the relationship

between land use and sustainability of the historic urban landscape and conclude by suggesting a sustainable development plan for the valley.

## 2. Study Area

Kayseri, one of the pioneer cities of the Anatolian Tigers, is a remarkable industrial city which has grown rapidly since 2000 due to the economic liberalisation policies introduced in the 1980s. In 2004, the city applied to the Guinness Book of World Records for having the most new manufacturing industries -139 factories- opened in a single day [6]. There are three valleys on the western edges of the Koramaz Mountains, in Kayseri. These are the Derevenk Valley, the Ağırnas Valley and the Gesi Valley. The Derevenk Valley, which is located 10km southeast of the metropolitan city of Kayseri, in the Melikgazi District, is one of the most attractive, extraordinary valleys in the Koramaz region [7].

### 2.1. The Historical Development of the Derevenk Valley

The name Derevenk, which consists of the Turkish words "dere (in English creek)" and "venk (in English church)", means the monastery of Jesus in Armenian [8]. On the other hand, the meaning of "dere" or dara/darra دره / دره in Persian is "valley, gorge between two mountains" [9]. Similar to the dictionary definitions, the Derevenk Valley is a narrow canyon created by the Derevenk River which flows intensely in spring time. The valley is a place where agricultural lands, vegetable fields, traditional industrial areas such as linseed oil mills, ruined traditional houses, rock churches, monasteries and small historic towns can be found. A painting found in the caves of the Derevenk Valley shows that this region has been inhabited since 1500 BC [10].

TABLE I: Muslims and Non-Muslims in the Neighbourhoods of Germir and Tavlusun, in 19th century. [16]

Village	Neighbourhoods	Muslims	Orthodox	Gregorian
Germir	Acı Arzman			X
	Acısehak		X	X
	Baba Abraham		X	
	Baba Yivan		X	
	Balaba			X
	Balban		X	
	Bostancı		X	
	Çorbacı		X	X
	Karsu		X	
	Kirisçi			X
	Koyuncu			X
	Kuşhane			X
	Pehli			X
	Sodamin			X
	Sirin			X
Germir_a		X		
Total population of Germir	2,923	489	1476	958
Tavlusun	Cami-i Kebir	X		
	Cami-i İmam Huseyin	X		
	Yukarı	X		
	Tavlusun_a		X	X
	Herdem		X	
	Ugurlu		X	
Tavlusun_b		X		
Total population of Tavlusun	1,195	699	314	182

Of the 112 villages and neighbourhoods of Kayseri, Germir and Tavlusun were settled at the head of the valley. In the 19th century, Kayseri was a large commercial city and the villages of Germir and Tavlusun were rural settings in which Muslims and non-Muslims, namely Greeks and Armenians (see Table I), lived together for many years. While the majority of Germir's inhabitants were traders and merchants, Tavlusun's were bureaucrats and officers. These wealthy societies lived in outstanding houses which were unique among the

other Anatolian towns [11]. According to Comert [12, 13], as a result of their taking Istanbul's (the capital city) architecture as their model, the wealthy people living in settlements like Germir, Tavlusun, Talas, Efkere and Zincidere had Italian architects draw up the plans of their villas and mansions. After the Tanzimat era, building construction accelerated, and the price of houses rose from 500 cents to 70,000 cents. The real estate value of buildings constructed between 1872 and 1875 was quite high. Therefore, these settlements in 19th century Kayseri were known as "Kayseri's Kayseri" [12]. A traveller called Nauman stated that the elaborately and highly decorated houses in Germir and Kayseri were similar to each other [14]. In 1922, it was reported that "here, in villages and townships such as Efkere, Talas, Tavlusun, Germir, Ortaköy, there were strikingly big, attractive, and well-proportioned houses which were built better than the other settlements in Anatolia. The top covers of the dwellings were soil, even the streets are irregular, and they are not muddy and dirty, because of the good street pavements" [15].

After the departure of the Armenians in 1915, and the emigration of Orthodox Greeks in 1923, the loss of the population of artisans and wealthy traders who had settled in Germir and Tavlusun affected Kayseri's economy for many years [13]. Afterwards, both the historic towns of Germir and Tavlusun and the natural landscape of the Derevenk Valley were officially designated as a conservation area in 1993. Today, Germir and Tavlusun are classified as a neighbourhood of the Melikgazi District, which is one of the main districts of the metropolitan city.

## 2.2. Historic urban landscape of the Derevenk Valley

Each having its own cultural value, Germir, Tavlusun, Derevenk, Reşadiye and Zincidere are settled along the Derevenk Valley. Both Germir and Tavlusun, which are located on the northeast bank of the valley, on the edge of the Derevenk Valley, are quite distinct from the others in terms of their architectural, cultural and sociological features inherited from the centuries-old development of the towns. Germir and Tavlusun are unique examples of an architectural ensemble forming a harmonious homogenous entity with the outstanding natural configuration of the rocky slopes and green valley. Several typological groups of immovable heritage sites from various periods, which were formed over the centuries, exhibit the unique historical stratification in the valley. These can be listed as follows:

- Archaeological heritage sites which can be dated to Roman times,
- Religious architectural sites: Muslim mosques, Armenian-Gregorian and Greek-Orthodox churches
- Examples of vernacular architecture,
- Examples of traditional industrial, commercial, educational and infrastructure-related buildings and shops,
- Rock-cut spaces, tombs and dovecotes.



Fig. 1: (a) Location of the valley [17] (b) General configuration of the landscape in Germir and (c) in Tavlusun.

The squares, streets and houses of the towns are in harmony with the natural topography and materials of the area. Traditional houses in Germir and Tavlusun are one or two storeys high, and most of them have a courtyard surrounded by stone walls. The mosaics of the courtyards and vegetation play an important role in linking the architecture and the natural environment. The traditional street structure represents an irregular system of narrow meandering streets. The main urban axes with street pavements are evidences of continuity throughout the ages. In addition to traditional public lanes/streets, one can clearly see that there were public squares with public buildings around them. For instance, Tavlusun's Hamidiye mosque, Germir's Armenian church and their squares are remarkable. Each one of the towns possesses unique urban silhouettes. In particular, in Tavlusun, the lovely

view of Mt. Erciyes, which is the most frequently used symbol of the metropolitan city, and also Mt. Ali, near to which the touristic and historic town of Talas is located, may be sighted. In addition to these, the Derevenk Valley is an ideal place for trekking activities and nature walks.



Fig. 2: (a) Characteristics of the vegetation along the valley (b) Authentic urban fabric in Tavlusun (c) in Germir.

Nowadays, the inhabitants of historic towns tend to leave because of unemployment problems and lack of job opportunities. Due to the rapid urbanisation of Kayseri city, apartment housing areas surrounding the Derevenk valley from the east and west sides threatens the outstanding universal value of the heritage sites. The valley is not suitable for car traffic, because the roads are narrow and twisting, but conversely they are good for walking. The best examples of vernacular architecture are not preserved and are in a state of rapid deterioration. They are threatened by inharmonious changes or physical damage caused by either natural factors or a lack of regular conservation and restoration works. The religious architectural sites are in an unsatisfactory physical state, as they are lacking both maintenance and restorative interventions. The archaeological sites are not excavated, preserved, or accessible. There are newly built areas within and outside the boundaries of the heritage sites that are not in harmony with the historic urban landscape. As a result of the inharmonious changes in the sites of vernacular architecture, serious damage can be observed in the urban fabric, stemming from the appearance of new inappropriate constructions. However, the characteristics of the main urban silhouettes are still preserved. The continuity in the character of traditional public lanes/ streets and public squares is almost completely preserved. Nevertheless, the general configuration of the urban landscape has not as yet experienced irreversible transformations which destroy the landscape's authenticity.

### 2.3. Land-use plans

Land-use and development regulations are one of the most important planning tools of municipalities. In the hierarchy of the urban planning system, there are 3 main documents related to the Derevenk Valley. One of them is the Environmental Landscape Plan approved in 2013 [18]. The following five principles represent this plan's vision for future development in the city of Kayseri. They are based on the main goal of sustainability. These principles are integrity, conservation, development, planning and participation. Specifically, the plan will serve the following purposes [18]:

- To produce general land-use decisions that will allow "the balance between protection and re-use" in the region.
- To achieve the hierarchy of settlements within the framework of local development potentials and environmental dynamics.
- To assess and orientate the agriculture and animal husbandry, industry and service development sectors and to establish the sub-centres that will specialise in different sectors.
- To establish a basis for development plans in lower scales.

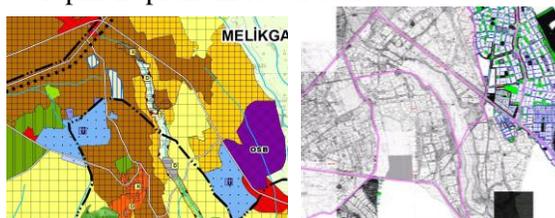


Fig. 3: (a) Environmental Landscape Plan [18] (b) Development plan's decisions for the valley and its surroundings [19].

The land use and development plan sets the course for changes to the city's zoning and development regulations. The goals and the almost single form of housing options in this plan are based on the Environmental Landscape Plan [19].

The Germir-Tavlusun natural conservation site consists of 87 hectares. The Germir urban conservation site comprises 28 hectares, and the Tavlusun urban conservation site covers 22 hectares. Currently, land uses including housing, trade and social facilities are located within the conservation sites. Studies regarding the protected areas, which were designated as a conservation site in 1993, have been carried out since 2011 [20, 21]. Although the conservation-aimed building development plan has just been completed, it has not as yet been approved by the Regional Council Conservation authorities. Notwithstanding, the areas described in the conservation-aimed building development plan (CABDP) illustrate a vision for land use and the future physical development of buildings and real estate in Germir and Tavlusun.



Fig. 4: CABDP of (a) Germir [20], (b) Tavlusun [21] and (c) Natural conservation site [22].

The plan merely consists of a concentration of interesting historic architecture. It is arranged as a car-vehicle road network, not as a “walkable neighbourhood”. It proposes restricting development along the valley and also inside the historic urban landscape. Inside the valley, the natural conservation site was defined as an area whose natural and ecological structure should be protected. Accordingly, areas which possess natural, ecological, topographical, geological, and local vegetation features and silhouettes such as rocks, scrub, bush, riverbanks, sand, reeds, swamp, canyons etc. and which are of agricultural value are expected to be designated as no construction zones. On the other hand, the environs of the natural protected areas have been completely designated as an urban residential development area to include high-rise apartment blocks. The plan proposes no commercial uses or any working areas adjacent to the traditional residential neighbourhoods of Germir and Tavlusun. Designated open spaces include publicly owned parks and wooded areas. These neighbourhoods include single zoning blocks throughout, defining the preferred urban form for the future.

### 3. Discussion and Conclusions

The Derevenk Valley is a combination of history and nature and also humankind. It is obvious that both the valley and its historic towns are under pressure from urban development, particularly for residential uses. The plans intend to strengthen the poor infrastructure. The main problems of the study area are the low income of its residents, lack of landscape architecture planning, risk of car traffic, and lack of conservation interventions on the rock-cut spaces throughout the Derevenk Valley. Analyses of the literature as well as observations on site have demonstrated that the need for the conservation and protection of cultural heritage has been defined in planning documents of all levels. Moreover, the conservation-aimed building development plan described the basic guidelines and fields of priority of the study area. These land-use and conservation plans consider the valley and its historic urban landscape as an isolated entity from the surroundings. This development pattern is inherently unsustainable. This land-use and transportation pattern expands outward from the valley into the towns below and various neighbourhoods via the transportation networks. However, this may augment reliance on automobile travel and discourage visitors and residents from utilising mass-transit, bicycle and pedestrian transportation. For this reason, the plans should include other modes of transportation which reduce the negative impacts that private vehicles and parking facilities have on the historic urban landscape. To protect and enhance a sustainable, urban land-use pattern which accommodates a mix of land uses, including retail outlets, offices,

restaurants, social facilities and amenities, within easy proximity to residential areas, neighbourhoods should include mixed-use commercial corridors and nodes that encourage pedestrian activities within the valley. Regulation of major alterations within the district should be discussed with property owners and residents of the towns. Flexible regulations facilitating creative new uses for the land and buildings, provided they preserve the character of architectural ensembles, will not detract from the historic urban landscape.

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