Lehrstuhl für Landschaftsarchitektur und öffentlicher Raum

LANDSCAPE ARCHITECTURE ON ARCHAEOLOGICAL SITES

Establishing landscape design principles for archaeological sites by means of examples from West Anatolia, Turkey

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ABBREVIATIONS

ICOMOS	International Council on Monuments and Sites
ICAHM	International Committee for the Management of the Archaeological Heritage
UNESCO	United Nations of Educational, Scienctific and Cultural Organization
WHS	World Heritage Site
WHC	World Heritage Convention

ABSTRACT

Archaeological heritage, as non-renewable cultural resource, refers to the past anthropogenic and natural changes in the cultural landscape. It is an essential fact that tangible and intangible heritage are integral components of cultural landscapes. Archaeological sites, as a part of this system, not only possess essential data about past cultures, but also valuable ecological and visual qualities. In this respect, cultural heritage enhance the quality and identity of urban as well as rural environments and provide for local residents economical wealth as tourism resource. Consequently, archaeological sites should not be assessed solely as scientifically research fields. But in many cases, archaeological sites and monuments are still far away from being integrated into their present day setting. The fact is that the landscaping of an archaeological site is still one of the most controversial and unsolved aesthetic and functional design tasks which have drawn little attention among scholars.

The dissertation aims to evaluate the archaeological sites from the perspective of landscape architecture and provide a new approach to the concept of heritage and nature preservation in terms of landscape planning and design principles. Hence, heritage planning requires not only to protect and display the preserved remains, but also to convey the spatial and visual connection between the archaeological setting and the material. Visibility of the archaeological landscape is strongly related with the integration of archaeological site in the landscape by means of presentation and site landscaping. Additionally, vegetation, considered as an important landscape design element, is examined with possible usage patterns. In order to protect and present the heritage values for contemporary and future generations, it is of importance to develop an integrated planning concept including visually and historically sensitive landscape design with a sophisticated tourist appeal.

In the research, seven archaeological sites from West Anatolia are analysed and consequently the typology of presentation forms are established which constitute basis for the landscape design principles. These general issues are then exemplified in detail by means of three case studies from western Turkey. These archaeological sites are analysed in terms of landscape features including topography, vegetation and visual aspects. The situation based problems help to identify the actual and potential conflicts that arise from use of the heritage, to examine possible landscaping and planting options and finally to make proposals for the presentation of the archaeological heritage.

ZUSAMMENFASSUNG

Als nicht erneuerbare Ressourcen reflektieren archäologische Denkmäler anthropogen und natürlich bedingte Veränderungen in der Kulturlandschaft. Archäologische Stätten und Monumente, sichtbar oder unsichtbar, sind Komponenten der Landschaft und weisen archäologische sowie ökologische und landschaftsästhetische Qualitäten auf. Die antiken Stätten und Denkmäler bilden nicht nur die kulturhistorische Identität und erhöhen die Lebensqualität einer Region, sondern prägen auch oft eine vielseitige Landschaft, die den Stadtbewohnern und Besuchern als naturnahe Räume und Erholungsgebiete dient. Darüber hinaus sind archäologische Stätten die bevorzugten Anziehungspunkte und stellen somit einen wichtigen ökonomischen Sektor für Städte und Gemeinden dar. Jedoch wurden die archäologischen Stätten unter dem landschaftsarchitektonischen Aspekt zu wenig untersucht.

Diese Dissertation befasst sich mit der Präsentation archäologischer Stätten unter Berücksichtigung landschaftsarchitektonischer Gestaltungsprinzipien mit dem Ziel ein Konzept für den Umgang mit Bodendenkmälern in der Landschaft herauszuarbeiten. Dabei geht es um die Erschließung und Gestaltung archäologischer Stätten unter Berücksichtigung von Denkmal- und Naturschutz wobei der landschaftsarchitektonische Ansatz darüber hinaus geht die historische Substanz zu sichern und zu präsentieren indem er auch den räumlichen und visuellen Zusammenhang mit der Landschaft zu vermitteln sucht. Visuelle Wahrnehmung an den archäologischen Stätten ist verbunden mit deren Integration in die Landschaft durch Landschaftsplanung und Präsentation. Auch Vegetation wird als ein entsprechendes Präsentations- und Designelement betrachtet was durch unterschiedliche Nutzungsmöglichkeiten erläutert werden soll. In diesem Zusammenhang möchte ich auf die Möglichkeiten und Notwendigkeiten eines integrierten Planungskonzepts verweisen, welches historische, visuelle und touristische Aspekte beachtet um Schutz und Präsentation zukunftsorientiert zu vereinen.

In der vorliegenden Arbeit wird anhand der aktuellen Erscheinungsbilder und landschaftlichen Zustände sieben verschiedener archäologischer Stätten der Westtürkei eine Typologie der Präsentationsformen vorbereitet. Abschließend stelle ich drei konkrete Beispiele vor und diskutiere die Präsentationsstrategien in Bezug auf ihre landschaftsarchitektonischen, ästhetischen und archäologischen Qualitäten, wobei die verschiedenen situationsorientierten Probleme erörtert und mögliche Lösungen anhand von Vorschlägen verdeutlicht werden.

1 INTRODUCTION

Landscape architects study landscapes and their components, explore the interactions between human and environments, and finally they create a backdrop of their understanding and reflect to the open spaces in rural or urban landscapes. In doing so, they consider the space as an entity to be perceived and contextualized. But above all, they visualize landscapes within their meanings. In this respect, Lynch (1971: 189) wrote:

> "What we require is a landscape, technically organized so that its parts work together but perceptually coherent as well, whose visual image is congruent with its life and action."

Everywhere in the world there is a cultural landscape constructed by human beings in the past and at present. Traces of past, revealed visible as archaeological remains and natural formations or hidden features and meanings through mythological creations, ascriptions and traditions, are reflected in every landscape and so they constitute an important and valuable component of landscape architect's domain.

Ecological and archaeological studies including exploring and exploiting the past landscapes have raised the awareness of preservation of nature and heritage. Accordingly, the need to protect the natural and cultural resources[1] of the world has become an important task. For this purpose, programmes are launched and researches are conducted towards this end. In order to preserve, but at the same time to exploit the resources, different aspects of planning process are to be established. Yet, it is not always possible to separate the "cultural" from the "natural", as the overlaps of particular features are significant. Furthermore they are not in practice hard-and-fast distinctions. When preserved natural and cultural components exist at the same site, the data base consists of a wider scope, ranging from ecological to archaeological content. This relationship provides other aspects to be envisaged. The need for clear definition and comprehensive understanding of different elements of the historic environment is a prerequisite to ensure the sustainability of the resources by means of planning the environment.

The sites of archaeological significance appear in different forms. Some are included in living urban ensembles, part of a site continuously occupied where a contemporary population is active, the historic centres of big cities such as Rome and Athens. Others are isolated and have long been deserted by their inhabitants. Some have only been revealed by search or accident. Modern towns exist over the layers

[1] The term "resource" is here used in a broader scope; it is considered not only as the natural resources such as raw materials (fossil fuels, minerals, water etc.), but also as the surviving physical relics and their symbolically associations such as archaeological remains, historical events, personalities as well as historical landscapes and environmental resources like soils, wildlife habitats, vegetation, topography etc.

on an ancient one. While such archaeologically sensitive areas shape the scenery and image of urban areas, the ones in the countryside impact the landscape.

Contemporary archaeological sites are the products of predominantly man-made undertakings. Besides anthropogenic and natural processes appearing in the course of time, the archaeological activities conducted on the sites have changed the visual, physical and spatial appearance of the site and its landscape. On the one hand this has frequently led to the deterioration of the site and surroundings lessening its aesthetic values, but on the other hand, inevitably it has opened a wide scope of facts about past cultures. In this respect, the aesthetic situation of the site after the excavations is always very critical. Papageorgiou-Venetas (1991: 46) cited from Henry Miller who criticized the view of archaeological landscape after the excavation activities during his Greek journey in 1939. For him, the place was ruined by the rest of big tracts of land:

> "In order to uncover a mess of ancient relics which will be hidden away in museums. The tourist comes and looks down at these ruins, these scientifically created lava beds, with a moist eye."

In addition to this, heritage conservation has become an important issue through tourism expansion embarking on governmental policies and policy-making concerning with the sustainability of the archaeological heritage and its surrounding landscapes. Consequently, many projects are furthered to provide this goal.[2]

In recent years, recreation and visual amenity concerning the historical and scientific values have played an important role in the development plan of the historical places of urban and rural landscapes. Archaeological sites are recognized as an important magnet point due to the growing public interest and consequently mass tourism. Hence, there is a demand for planning of new services and facilities to support the regional or local growth, as well as to reduce the damages and impacts of exploitation by means of integrated planning principles. Regarding the threats of exploitation of ancient heritage, De La Torre (1995) discusses that the archaeological heritage faces increased risk of destruction from unchecked development, new infrastructure systems, excessive visitation, and inappropriate interventions that attempt to preserve the sites for tourists. To reduce all these impacts, archaeological sites should be presented in their setting which requires an integrated planning and presentation concept for the usage of archaeological heritage as tourism and heritage concept are both inseparable terms.

Tourism is mostly focused at places specially contrived as visual displays (Jakle 1987: 10). Additionally, cultural and natural resources are important parts of it.

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[2] Pamukkale-Hierapolis Development and Conservation Plan (1992)
Avebury WHS Management Plan (1998)
Stonehenge Management Plan (2001), Stonehenge Land Use Plan (2001)
Pamukkale Koruma ve Sergileme Plan Raporu (Pamukkale Preservation and Presentation Plan) (2002)
Hadrian´s Wall WHS Management Plan (2002-2007)

Historic landscape features constitute very valuable visual amenity in the wider landscape where features are extensively inter-visible. Such kinds of landscapes have vivid and integrated physical settings, capable of producing a sharp image.

Lipe (1984) comments on the usage of heritage combining with marketing preclude their use as informational or symbolic resources. So every intention to the heritage should be involved in a large scope concept taking account scientific as well as visitation aspects. Furthermore, their survival depends on the interest and attention of scientists, lay and local people regarding research, economic development, and tourism. Consequently, alternative site-usages including the heritage and nature protection are crucial for the further work. This necessitates a thoroughly developed planning concept carried through by an interdisciplinary group of scientists and experts. These may be controversial issues, but archaeologists need to become aware that they may find themselves confronted with this situation in the not too distant future (Currie 1992: 181). Landscaping will become widespread because the natural characteristics and the landscape can not be ignored and separated anymore. So, to meet the problems objectively, landscaping and design strategies should contribute to the overall concept.

In this dissertation, a set of methodologies was selected to establish landscape planning and design principles in terms of archaeological site presentation. The second chapter examines cultural landscape in terms of cultural, historical and archaeological aspects from different viewpoints of landscape studies. The parallels and comparisons are drawn between their formation and evaluation. For this, it is essential to examine the evolution of cultural-archaeological landscapes to understand the interactions between environment and human. Associated with the concept of space as a cultural-historical landscape, the visual and cognitive perception of historical environment is also an essential aspect in design profession. As Higuchi (1983: *ix*) states in his foreword that it is basic and essential to grasp the nature of that setting as a visible spectacle and to understand its spatial structure. Hence, it is aimed to explore the nature of historical landscapes and their importance regarding the meaning, visual qualities, form, image and functions.

In the third chapter, archaeological sites are examined within their settings as “archaeological landscapes”. In order to study the archaeological landscapes, it is of importance to define the concept of heritage, heritage protection and their management. Heritage represents valuable features of the past protected for the next generations. Moreover, it benefits for the community. In this respect, heritage comprises protection of cultural and natural resources as well as contemporary uses of history. It is discussed that the heritage is, to a great extent consumer-defined and it is a specific use of history. Additionally, protection involves repair and restoration as well as reconstruction as presentation of archaeological remains. Here, problems arise in defining the authenticity and heritage presentations including reconstructions.

The fourth chapter illustrates the results of the empirical research conducted at selected archaeological sites from the west Turkey. For this purpose, discourse method was taken as the basis for the research analysis. Interviews with excavation

and museum directors as well as various materials like plans, documents, and photos constitute the discourse results. Consequently, the typology of presentation models is developed to establish a basis for the comprehensive site design and management within the historical environments. Each model indicates characteristics of landscape design and heritage preservation.

In the fifth chapter, it is attempted to establish theoretical principles of landscape design and presentation at archaeological sites. Design guidelines focus on issues such site organization, infrastructure and replanting. Vegetation emphasizes the spatial scenery and characterizes the visual landscape. Planting at archaeological sites requires particular planning and design patterns fitting to the topography, archaeological material and native vegetation. Furthermore; protection, readability and enhancement of the ancient topography of the site with the sensitive treatment of the materials is also necessary for an appropriate work. To sum up, “the marvel of the careful integration, the respect of genius loci and the submission of the archaeological heritage” (Papageorgiou-Venetas 1991: 38) are prerequisite for interpretation and presentation of the ancient physical setting.

Chapter six aims to propose planning options with concrete case studies from Turkey by means of the results of empirical research and theoretical landscape design principles. Pergamon, Ephesus and Hierapolis-Pamukkale, selected from archaeological sites in the Aegean part of Turkey, are evaluated by the aspects of location and landscape features as well as historical and archaeological values including vegetation. Consequently, the proposals about possible presentation forms including planting options aim to illustrate an alternative approach to the management of archaeological sites from the point of a landscape architect. Therefore, it is intended to make aware of the interrelations of the natural and cultural components of the archaeological sites.

Finally, the dissertation is concluded by discussing the facts and ideas comprehensively. It is questioned that the complete and equitable resolution for archaeological landscape design might be achieved, despite the conflicts, respecting the archaeological and nature preservation as well as contemporary impacts of heritage usage.

2 LANDSCAPE AND CULTURE

2.1 Cultural Landscape

Landscape is a very complicated and ambiguous word. It has the ability to absorb different meanings regarding to the culture, place and time. Besides landscape architecture, several fields have grappled with landscape regarding the terms ranging from geography, tourism, to archaeology and anthropology. That is why, landscape[3] as a concept is eclectic in its origins (Coones 1992: 23). The understanding of landscape concept is of essential importance to comprehend the link between nature-human relation and the cultural resources in order to conceive the past uses and determine contemporary planning proposals for present-day uses of archaeological sites.

Landscape is an entity that exists by virtue of its being perceived, experienced, and contextualized by people (Ashmore 1999: 1), but at the same time from a spatial perspective, it is a unity of a setting, location, or site of a historical settlement encompassing an extensive area of scenery which is persistently influenced and modified by abiotic and biotic processes.

Landscapes reflect the interactions between people and their natural environment over space and time. Because humans generally modify the landscapes in which they live, and because they attach names, myths, and affective value to features of the territory they inhabit, the landscape of past cultures may also qualify as cultural resources (Lipe 1984: 1). Every generation inherits a landscape and changes it to new conditions; in this sense, the landscape is never complete, but always under construction. Therefore, landscape is here considered as the setting of natural and man-made processes that are dynamic and regenerating ecosystems. In this sense, all landscapes can be regarded as cultural landscapes. Without socio-cultural framework, space has no qualities of its own; the interaction between nature-culture reveals the cognitive, material and functional aspects (Georgiadis 2003: 27).

Landscape[4] consists of visible and perceived environments; they are constructed both materially and perceptually (Jakle 1987: 20; Bourassa 1991: 8; Terkenli 2000: 202-203). They are endowed with concepts of memory and continuity reinforcing the

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[3] Landscape should be described by means of related aspects rather than a generalized term. The term landscape, as a concept, implies more than greenery and inland scenery. A holistic approach defining and evaluating the term “landscape” is not sufficient due to its nature of complexity, variability and dynamic change of landscapes. In the broader sense, landscape is regarded as an object; “an entity” including the man-land relationships emphasizing the way in which the people have shaped the physical appearance of the landscapes. This aspect appears to be a holistic approach in the landscape studies. The characteristics of such landscapes shaped by human occupation and use at some period are presented as archaeological sites and monuments. At spatial scale, they are archaeological landscapes presented within their natural and cultural resources.

[4] In this definition, landscape is conceived as the image of the space or environment which is a structural impression (Arriaza *et al*. 2004: 116) and as a construct of the mind and of feeling (Tuan 1979; Terkenli 2001: 198). Space as a limited or an unoccupied area functions as a component of landscape serving to background of our environmental image.

senses (Ashmore 1999; Alcock 2002) that makes the cultural landscapes closely associated with past events and historical features. Additionally, landscapes as spatial units of human activity are affected by the economical and social changes in the course of time which plays an important role in shaping the functions and usages of landscapes and their components. All these certainly incorporate the spatial manifestation of the relations between humans and their environment. The interest in cultural landscapes, their values, cultural-historical landscape assessment and management include all these distinctive aspects providing enhancement of landscape resources in all levels.[5] From the view of landscape archaeology, the landscape approach provides a holistic aspect to archaeological interpretation both in terms of the spatial distribution of archaeology and the temporal persistence of natural and cultural landscape features.

Landscapes comprise two types of resources in terms of their social and tangible values and associated qualities in terms of holistic approach; namely natural and cultural resources.[6] Mills (1992: 190) defines cultural resources as anything created or influenced by people; a theatre, literature, an oral tradition, buildings constructed a few years ago or the remains of prehistoric settlements. Cultural resources emerge as material resources such as the remains of past cultures, and relevant social or historical meanings as non-material resources in archaeological landscapes.

Therefore, cultural resources present the features that have survived from the past, and their studies are concerned with the use in the present and future. The natural resources of the landscape encompass elements including flora, fauna, topography, and geology which are regarded as an integral part of this approach.

Contemporary landscapes encompass directly or indirectly historical values in terms of nature-human relationship. This complexity exposes a very specific setting; namely historical landscapes which require integrated interests of disciplines regarding planning, conservation and management. On this basis, a conceptual framework of contemporary landscapes is proposed in two stages to define the ultimate goals of landscape planning and presentation patterns.

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5 Regarding the research of environmental assessment, various arguments from different authors about basic qualities in the human perception have propounded both in psychological approach (Nohl 1987, 1995; Bourassa 1991) and design studies (Lynch 1971, 1972; Ashihara 1983; Jakle 1987; Schafranski 1996; Berleant 1997). From the philosophical point of view, authors like Rutledge (1981) and Ashwort & Tunbridge (1996) had stressed the importance of the behavioural experience.

6 Behm (2000: 284) classifies the aspects of archaeological landscapes in terms of their ideal and material features, ecological qualities and landscape aesthetics. According to Behm, ideal qualities enable the landscapes to identify archaeological, historical and social aspects, the current global and regional environmental problems and their solutions. On the contrary, material resources or material culture, namely the remains unburied or excavated on the sites are of less importance on the landscape-based research activities, as they are valued with monetary qualities. However, from the point of landscape aesthetics, these are cultural resources making the historical landscapes. Consequently, making use of them depend on their appearance as well as their contribution to the understanding of the evolution of spaces they occupy.

These are;

- Evolution of archaeological sites within their landscape in order to understand the archaeological landscape and to analyse continuous interactions and interrelations between nature and cultures.
- Evaluation of landscapes in order to find out the results of these interrelations and interpret for the contemporary and future needs and usages.

2.2 Evolution process of historical landscapes

Essentially, all cultural landscapes[7] are historical, thus the factors like time, setting and people can influence the development of historical situation or conditions. According to Atkins *et al.* (1998)[8], it is developed in two ways. Firstly, it is deterministic in the sense that some natural characteristics can not be prevented. Secondly, it is the process of culturally changed environments which have lost the characteristics of initial environment due to the undergoing changes by human impact. Under the influence of a given culture the landscape became the repository of that culture's strivings against its environment and the tangible record of man's adaptation to the physical milieu. In this, culture was the agent, the natural environment the medium and cultural landscape the result (Barker & Darvill 1997: 34). In this sense, it is axiomatic that earlier communities also had a landscape in their own perception occupying the same place of today's landscape. Most such landscapes of remains, deriving from the ancient times, have long ago become isolated sites without the context they once had within a wider system. All, however, contribute the understanding the evolution of the spaces they occupy, and in some cases continue to influence contemporary action and give texture and character to the modern landscape (Darvill 1997: 79).

The manifestation of archaeological sites and their landscape embrace slow but dynamic and continuous processes due to anthropogenic and natural forces. These two main forces influence directly or indirectly the landscapes, impinging them in all scales, from local to global, and accordingly causes drastic changes in the pattern of built environments. The abiotic components such as soils, water or minerals and biotical factors like flora, fauna and ecosystems have been affected due to natural and anthropogenic forces as well as global environmental impacts.

The relation between heritage and environment implies more than a matter of scenery; it is a complex and deeply organic relationship emerging from the functional, structural and ecological character (Anagnostopoulos 1975: 147). Table 2.1 shows a summary of evolution processes of archaeological landscapes from the point of natural and man-made influences on the landscapes. The physical conditions that

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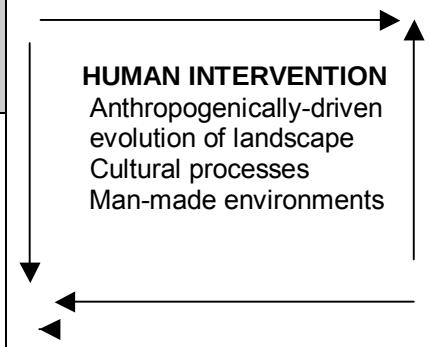
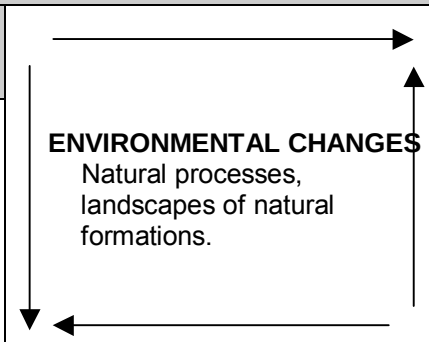
7 Landscape is here used entirely in a rural sense though it covers urban landscapes as well. Besides rural landscapes, townscape and cityscape are subdivisions of the landscape.

8 For detailed information about the historical, chronological and geographical development of the relations between landscape, culture and environment: See "People, land and time" (Atkins *et al.* 1999).

now prevail in the area surveyed or excavated differ from those of the period (box 7). The fact is that the human record as just one of the many sources of inorganic and organic material bearing on ecological history (Vita-Finzi 1978). Each box represents processes during the evolution of archaeological landscapes. The first and last processes (box 1 and box 7) have common characteristics through the historical development of the landscape and the geographical area. Moreover, the table is arranged in a “u-form cycle” as it is a continual process in which the current heritage is a component of the future historical landscapes in another usage valued for another quality and social standards.

Table 2.1 Evolution of archaeological landscapes in terms of man-made and natural forces.

1.WORKING LANDSCAPES in the PAST		**7.CULTURAL HERITAGE (still working landscapes)**
Rural landscapes: Agricultural fields, forests (timber production). Urban landscapes: City parks, open public areas, gardening, sanctuaries, streets.		Archaeological sites, historical routes, historical-cultural landscapes.
CHANGES IN THE LANDSCAPES		
2. DESTRUCTION		**6. CONSERVATION**
Natural forces: Geological changes, silting up, earthquake, eruption, erosion, climatic changes. Anthropogenic forces: War, fire, cleaning of forests due to intensive farming and pasture.		Conserved built environments, archaeological activities, deterioration of vegetation and topography.
3. DECAY	**4. REGENARATION of VEGETATION**	**5.ARCHAEOLOGICAL LANDSCAPES**
Changes in vegetation and plant succession. Re-founding and plundering of cities, new constructions over the old settlements, degradation of ecosystems.	Regeneration of vegetation, small settlements, re-wilding of vegetation, new plant formations, relicts of forests. Exposed and buried structures in the rural landscapes.	Re-founding of remains, romantic landscape formations; archaeological landscape influences on the landscape architecture (English gardens).

2.2.1 Working landscapes

The ancient Aegean and Mediterranean regions have encompassed a wide range of high cultural settlements. Today, the remains of ancient Hellenistic and Roman settlements lend the Aegean and Mediterranean landscapes its typical character. Apparently, man's role in shaping the landscape started with the occupation of land and colonization of societies. They have undertaken interventions in the nature in which they had acquired benefit from the resources by using and exploiting them. So, the relation was strictly related to resource availability and environmental dynamics. Agriculture is the prototype of all such colonizing interventions. Additionally, natural features were generally directly associated with structures, beliefs and myths indicating a sacred character. These perfectly "working" landscapes had been already dominated by human beings and their natural resources were essential part of ancient economical, social and religious life.

Ancient cultures possessed not only the architectural and spatial capability in building urbanized systems, but also shaped their associated landscapes. They took advantage of the landscape's natural barriers, situating the buildings on the top of hills and along ridges. Natural resources such as vegetation, water, mineral and quarry played an important role in the ancient period. The environments of the settlements covered mostly cultivated areas for agricultural practices and pasture as well as timber production and quarrying. Public places and open areas constituted an essential part in urban life due to the sophisticated town planning. Gardens, sacred places, sanctuaries and monumental structures like fountains or sculptures were components of open space organisation.

2.2.2 Human disturbance regime and ecological dynamics

Mountainous as well as coastal regions dominated rich cover of coniferous and deciduous trees in the Hellenistic and Roman times in the south-west Aegean. However massive exploitation of timber caused degradations and even extinctions in specific plant species.[9] Contemporary degraded maquis and phrygana formations on the sites indicate the consequences of drastic topographical and ecological modifications due to anthropogenic factors during ancient time. Land and sea level had also been dramatically changed which affected the development of ancient cities like Ephesus, Miletos or Priene. The anthropogenic control of the river sedimentation on the floodplain could not prevent this process at all. The coastlines regressed, due to the large amounts of sediment deposited into the plain. This is a common phenomenon that has been observed elsewhere in the Aegean (Zangger *et al.* 2001: 91).

[9] Die heute in einer kahlen Umgebung liegende Ruinenstadt Priene lag nach Strabon in einem wild- und waldreichen Gebirge. Trotzdem haben sich manche Urwälder und viele Naturwälder erhalten, wo die anthropogene Beeinflussung nicht die extremen Standorte erreichen konnte (Mayer & Aksoy 1986: 30).

2.2.3 Decay era

In the centuries following the abandonment of Hellenistic and Roman settlements, the stones of the masonry structures were removed and reused in the construction of the next settlements by cultures of Byzantine, Seljuk or Ottoman periods. The constantly destruction process raised the recession of nature-culture balance and consequently the decay of material. On the other hand, the intangible features and traditions inspired the next generations. The cities temporarily abandoned, and then resettled. They were ultimately valued as an important source for building material and they had fallen into disrepair. Throughout the decay process, man-made environs and associated landscapes gradually disappeared due to war, natural catastrophes, climatic and topographical changes. Hence, the anthropogenic forces that have taken since occupation diminished and the natural forces dominated the formation of archaeological landscapes. The regeneration process of landscape and succession of plant species as well as the chemical and physical processes shaped the landscape and the nature of materials.

2.2.4 Discovery and anticipation of the ancient world

The discovery of ancient ruins and sites opened a new era of human induced changes on landscapes. At first, they were appreciated for their aesthetic qualities. The wild and untouched nature of ruins embedded in the “romantic” landscape influenced the contemporary art and architectural circles, in particular the landscape architecture practices in the eighteenth century. The appearance of archaeological remains was used to create artificial Roman ruins as patterns for architectural components of English landscape gardens. Accordingly, the excavations and researches have changed the untouched nature and modified the landscape anew. Contemporary appearance of archaeological sites is based on the results of excavation practices of nineteenth and the early twentieth centuries. This has resulted that the old structures, new social definitions and associated environments were interwoven creating a new physical fabric, so called “archaeological heritage” within its landscape which in turn became subject to human pressure. The public acquisition of archaeological findings on sites brought the growth of tourist visitation and further it promoted the tourism in the region. This time, the cultural material and its landscape were appreciated for its archaeological, amenity and economical values. Consequently, the mass tourism enforced the measurements for developing integrated conservation measures and appropriate planning strategies regarding its new task; namely creating a “heritage product” embodied in a new heritage-professional approach. Attempts to protect and to promote the values of historical sites also provided to signify the importance of presentation the visitor facilities on sites. The progress from ruin preservation to heritage management has also affected the planning approach and its focus of objects of attention.

2.2.5 New approaches to the archaeological landscapes

The aforementioned sets of events indicate that while the long history of landscape is closely related with the past human settlements and their cultural influences, cultural heritage is a product of the time and place of those who have created it, and continue to shape it (Ashworth & Tunbridge 2000: 10). In this sense, the past as well as present and future landscapes of archaeological interest should be envisaged as man-made environments and they are both exclusively designed for humans. Once densely settled and intensively cultivated areas have been converted into intensively researched and visited sites (Figure 2.1). With the decision to open and display the excavation sites for public, a new era has begun. Now, archaeology and nature could be seen and protected together. Figure 2.1 demonstrates the actions by each step which affected the values and qualities of the landscape. Although they resemble the way they had been structured, they have lost their original functional and social context. This is one of the important issues raising problems in understanding the relationship between spatial setting and the heritage. The landscapes indicate the evolution processes of past and contemporary cultural landscapes in conjunction with the historical and archaeological evidences. In traditional archaeological investigations, sites were considered as depositories of valuable artefacts to be retrieved from the ground. Today's regional archaeological projects aim to consider sites as settlement centres of dynamic and evolving societies whose fate and fortune depended largely on successful interactions with the natural environment (Zangger *et al.* 2001: 98). This approach set the base of design and re-establishment options on sites which appears to be a fictitious and irrelevant task, yet the close match and traces between the findings and that of modern vegetation suggests essential hints; the information on present-day conditions may help to resolve the readability of the ancient landscape and the genius loci of the historic site.

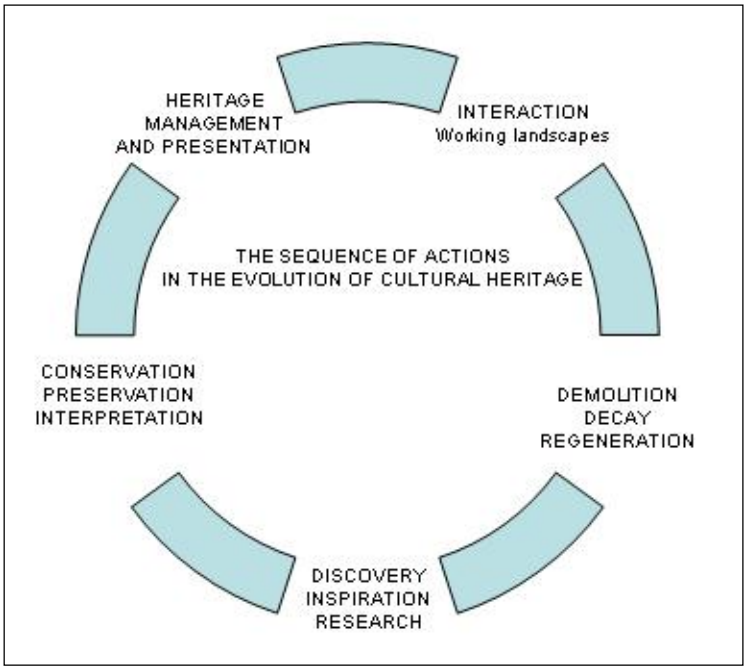


Figure 2.1 From working landscapes to cultural heritage: Cycle of the evolutionary process.

2.3 Evaluation of landscapes

The aforementioned relations and interactions between cultural elements and the environment play an important role in shaping the character of the historical landscape. Cultural material provides information about past cultures but the knowledge about past environmental changes is also of essential importance in understanding the archaeological context. In this respect, cultural material solely as an information source is not enough to reveal the basic relationship between human and environment. Landscape is a vast database with many valuable lessons to give, if interpreted intelligently. The totality of the information sources in the cultural landscape assembling heritage is called resource base (McGimsey & Davis 1977: 33; Tunbridge & Ashworth 1996: 7). It includes the information about remains as well as the landscape emerging at the level of spatial relationships between materials at a site, among sites, and between sites as well as aspects of the natural environment. McGimsey & Davis (1977: 27) state:

> "The resource base, then, is not just the sum of specimens and sites, but includes network of interrelationships that potentially can contribute another magnitude of information. In other words, the whole is greater than the sum of its parts. "

Historical landscapes embrace natural and man-made aesthetics, the interplay of natural, man-made and their associations as well as archaeological values. All these inherited features constitute the values[10] and significance[11] of cultural resources. Hence, value is a frequently used term in the archaeological heritage management. There have been a large number of publications on the evaluating, assessing, and valuing of archaeological artefacts and sites (e.g. Cleere 1984, 1989; Darvill 1987; Macinnes & Wickham-Jones 1992; Cooper *et al.* 1995; Mason *et al.* 2003). Value systems or gradients are not only prerequisite in terms of heritage management, but also they are essential in the planning process.

Archaeological landscapes vary in land form, land cover, vegetation, location and geological formation. Categorizing these landscapes may assist to manage these factors and connote the cultural development and spatial formations within the behavioural patterns of past cultures. Furthermore, the nature and dynamics of landscapes and their regeneration process can be pointed out in terms of conservation. On the other hand, applying this approach solely in order to define the decisive options in management planning may deny the essential organic development and change in the landscape which is one of the valuable features (Lambrick 1992: 119). From the ecological viewpoint Darvill (1987: 31) defined eight

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[10] In this study, value is meant to be the tangible and intangible characteristics and their meanings on sites. Values are not received, values result from a persistent and never ending competition for what is relevant and what is acceptable. It means that values emerge and evolve with changing use and new knowledge. They are influenced by changes in society (Darvill 1995: 41).

[11] Significance indicates the overall importance of a site, determined through the analysis of the totality of the values attributed to it and also reflects the degree of an importance of place (Mason *et al.* 2003: 2).

archaeological landscape categories: (1) Wetland, (2) Coastland, (3) Rivers, lakes, alluvial, (4) Arable and shorty ley, (5) Pasture, (6) Woodland, (7) Upland moor, (6) Lowland heath, (9) Parkland and ornamental gardens, (10) Urbanized/built-up. In terms of landscape design and land use planning, landscape types are of importance as planning options are determined according to the characteristics landscapes consist, advantages and disadvantages of proposed planning options in terms of heritage conservation and presentation. In Darvill´s category, it is obvious to see that coherent distinction of archaeological landscapes is based on the ecological and natural features of physical setting.

2.3.1 Resource base of cultural landscape

Resource base is a wide and varied mixture of past events, personalities, folk memories, mythologies, literary associations, surviving physical relics, together with the places, whether sites, towns, or landscapes with which they can be symbolically associated (Tunbridge & Ashworth 1996: 7). Regarding the resource base as a network of information enables the values to reveal in heritage planning which raises various controversies challenging in the conservation and uses of heritage. Additionally, resource base can widen the scope of heritage context, and consequently reduce the pressure on the cultural material. It embodies the options and objectives necessary for the appropriate attitude towards conservation, preservation and management as well as scientific considerations. Accordingly, a clear understanding of where the values reside and which features capture the essence of a given value is required in the integrated planning process regarding archaeological activities, presentation, landscaping, as well as conservation and management.

The purpose of evaluating cultural landscapes is to enhance understanding by defining their distinguishing qualities from different perspectives, by identifying significance through intrinsic and comparative values, and by articulating these aspects so that they may be considered, respected, and protected in the context of change (Cooper *et al.* 1995; McManamon *et al.* 2000; Mason *et al.* 2003).

As mentioned before, historical places evoke values through their natural and cultural resources and valued with related qualities. According to Mills (1992: 191) different values of natural and cultural elements exist in the historical landscapes according to their rarity, diversity, integrity, representation, context and location. The value of a heritage landscape is the product of past achievements and future potential. Parallel to this, the interests and demands of human beings influence the physical setting and the resource use in the long run as values are environmental qualities for people. Berleant (1997: 24) states that in living in the landscape, human beings not only shape the environment, but also establish its values.

2.3.2 Value Systems

Values-based approaches aim to analyse the values and significance attributed to cultural resources (Mason *et al.* 2003; Lambrick 1992). The identification of values and their significance provides the heritage to determine optimal use (scientific, recreational, economical etc.) and conservation measures. The evaluation of archaeological sites involves the determination of the importance or significance of each site or of a group of sites.

In general, the sites are valued as archaeological remains and consequently they are anticipated for their historical and social values (religion value[12], economical value) as well as aesthetic and natural values. The evaluation depends on the period and time, user, kind of the activity and usability of the object. Each different kind of activity leaves behind evidence which is proportional to its scale and intensity. Values are constituted by a complexity of remains, landscapes and modern usage. The main factors affecting value systems are social, landscape and natural processes as well as archaeological material and knowledge.

Visual values are interdependent on place, physical, historical and experimental structures, time, social structure of the visitor and the society, cultural and historical context. They are composed of two different aspects. First one is the visual aspect of the site within its landscape, and second one is the visual aspect of individual elements. Both of them are concerned with the presentation of site as a harmonious whole. For the visitors who are neither versed in the nuances of restoration philosophy nor skilful in relating what they see in three dimensions, the physical setting and landscape is in a great extend more important.

There are variety of classifications and explanations discussed by various authors articulating different methodologies. Indeed they encompass similar objectives and framework in practice and thinking.

The evaluation of archaeological sites involves the determination of the significance of each site or of a group of sites. The significance of a site is interchangeable; accessible information is permanent as it is always renewed until the research is completed, at the same time the architecture they illustrate depends on it. On the other hand, they are associated with important individuals, events or historical patterns, as well as the natural facilities.

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[12] The religion value can be considered as a good example. Ephesus is a case in point; while the pagan worship of Artemis has lost its religious function long ago, the early Christian monuments and events at Ephesus still animate the use of place today and endow it with contemporary religious value. Such monuments are still associated with the present beliefs. The Church of Mary has the emotional appeal more than its scientific significance. The value and the meaning of the object still affect the form of heritage and its function. Many other monuments sustain religious associations, even despite a lack of historical or archaeological validation. These include the Grotto of Saint Paul, the Church of Seven Sleepers on Panayırdağı.

The values can not be standardized, but they can be categorized by establishing a value system according to the objectives in the planning concept. According to Coeterier (2001: 115), there are four criteria embodying the evaluation concept: Form, function, knowledge and familiarity. As a result of his study in the Netherlands, it has been indicated that lay people's evaluations are based on form, while the main criterion for experts is knowledge. In some extend, the aesthetical values, and visual appearance perceived and appreciated through eye contact within the landscape are the basic values to be gained. While the value systems and strategies of cultural heritage and nature conservation have been often opposed to each other, both used a dualistic, static and conservative approach to protection.

The value system formulated by Darvill (1995: 40-50) includes three gradients with reference to archaeological resource. According to the impact range of values, Darvill has categorized this system as *use values, option values,* and *existence values*. Thus, this system tends to approach to the values in a hierarchical way as they are set out by priorities of cultural heritage interest. To optimise use of the heritage resources, the value options can be combined with each other.

Use values point out the demands and interests placed upon the archaeological resources by contemporary society. It is mainly based on the structural and spatial qualities of resources, namely the "consumption" aspect of history and archaeology such as heritage development and exploitation. It regards to the current context which requires making a tangible return. Certainly, the ancient objects and places are given a new set of meanings in the name of heritage. *Use values* are used in; archaeological research, creative arts, education, recreation and tourism, symbolic representation, legitimating of action, social solidarity and integration, monetary and economic gain.

Option value is considered as a perceptual interest rather than functional interest relating with the conservation and future potential issues. Stability, mystery and enigma are the gradients. Option value appears to be in opposition to use values regarding the heritage conservation.

Existence value is concerned with the existence of resource. It refers to intangible terms, such as associations, cultural identity and resistance to change. In this respect, spatial context doesn't play an important role.

If preservation is aimed, option and existence values will be exposed, while in integration, use values are also intact. Within each system there will be different emphasis on what is important, because each system has a different conception of importance through value gradients. Darvill`s value system does not depend on contemporary usages and solutions, but rather they represent options for universal criteria in terms of heritage planning and management.

Firth (1995: 56) separates values as being archaeological and non-archaeological. Non- archaeological value system includes commercial systems and aesthetic values which are closely related to the visual qualities of material. In doing so, he juxtaposes the values rather than categorizing them. Archaeological values

include more quantification of objects and sites rather than the material itself.

Schofield (2000: 79) categorizes historical elements in a sort of classification (*Class*) according to their structural features. In this classification, the heritage resources are valued scientifically in which the archaeological and historical features are pointed out. The valuing the group of monuments and heritage sites enables connection between artefacts and sites to set and compare. It is a holistic approach to heritage management, embracing the heritage and its environment.

They are as the following:

- Period (currency; the length of time over which a class of monuments was built and used),
- Rarity,
- Diversity (form; the variety or types within the class),
- Period (representatively; the extent to which a class of monument characterizes a period).

Discrimination criteria help to distinguish the resources from each other in comparing their qualities in every aspect:

- Survival,
- Potential (e.g.; water logging can provide for the survival of rare organic remains),
- Diversity (the variety of the component features present),
- Amenity value (the extent to which a monument can be readily appreciated by the public because of the accessibility and as a good example of its class),
- Documentation (historical; only applicable to some classes of monuments),
- Group value (association; association with monuments of other classes),
- Group value (clustering; association with other monuments of the same class).

According to McGimsey & Davis (1977: 33) is the area of public appreciation grades into research, because an archaeological resource usually does not become an object of public appreciation until information about is developed through research. In this case, the scientific and didactic value which is intact with the other values and qualities are taken into account while public perception is conducted by natural features and romantic views. It is generally possible to say that some archaeological sites and districts have more potential qualities than others for contributing public appreciation of the past. This is the result of a process which they reflect the ideas and associations existing in the landscape in relation with the physical form of the site.

The information accessible by both excavation and research, and the history are the results of site work, though design process is a visual experience. At the same time, the appreciation of an object or a landscape is an individual phenomenon

(Behm 2000: 285)[13]. Compared with the visual quality of design process, another aspect of resource revealing intrinsically at the site or region is the intangible value. Cultural resources can also acquire aesthetic use without being linked through associative value to knowledge about their past contexts. In this case, the visual aspect of landscape and the demand-based marketing of heritage can be regarded as the focal point which converts the archaeological material from "historical record" to an aesthetic ensemble. Consequently, the archaeological values are influenced by the changing aesthetic values, the appreciation of nature and contemporary presentation concepts and marketing strategies.

If the product of archaeology is considered to be served for public as presentable sites, the service of quality has to be raised. Above all, it is essential to ensure the continuity of the recreation region as an attractive area for potential visitors. Therefore, the qualitative strengths and weaknesses of the site within its environment should be discovered. This is related with the concept involving the organization of archaeological studies to the presentation and management terms.

The Strength-Weakness-Opportunity-Threat (SWOT) analysis is a summary of the international marketing audit. It helps to focus on key organizational areas that need to be taken into account when producing a marketing plan. Concerning this approach, SWOT analysis can be interpreted as an evaluation method of sites which enables to reveal the positive and useful factors as well as the negative and deficient factors (Dietvorst 1994: 85).

Dietvorst (1994: 87) mentions that the weakness and strengths of a cultural tourist product should be ascertained, it is a necessary means to avoid undesirable exploitation and degradation of irreplaceable heritage resources in providing the tools for effective city and heritage management. In this respect, it aims to improve the marketing position of heritage product, but at the same time, it tends to provide the sustainability of the historical and natural resources.

In the Pamukkale (Hierapolis) Preservation Development Plan (2000), the archaeological site was analysed by means of SWOT system which could be also partially implemented in defining the capacity of archaeological site within the surroundings to orientate the values as well as the dynamics of tourist recreational complex.

2.4 Classification of landscape types under protection

ICOMOS, which was founded in 1965, has hitherto been concerned principally with architectural monuments and archaeological sites. One of the fourteen International Scientific Committees, Archaeological Heritage Management did not involve the concept of cultural landscapes. Since 1989, the Landscape Working Group is developing procedures for dealing guidelines for the definition and protection of

[13] Behm (2000: 285): „Die Schönheit einer Landschaft ist einerseits ein sehr individuell wahrgenommenes Phänomen".

landscapes (Cleere 1995: 51).

UNESCO recognizes certain landscape types in the World Heritage List. The UNESCO definitions stem from a need to capture a wide and internally varied set of meaningful landscapes in a single protective net (Ashmore & Knapp 1999: 9). This list constitutes physical establishment of a hierarchy of objects and areas to be revered. These are the following (Cleere 1995: 55-58):

- Designed landscapes: Historic gardens and parks, where the natural beauty is the result of careful manipulation.

- Organically evolved landscapes: Relict landscapes

They are landscapes including tangible or intangible historical or archaeological features. Relict landscapes are essentially archaeological sites, where a process of organic evolution came to an end at some time in the past and where abundant traces of its former exploitation and development are preserved beneath and within a secondary natural vegetation cover. Such landscapes require the specialist advices of archaeologists as well as landscape architects. The involvement of different disciplines enhances the quality of the work. Relict landscapes are the results of significant climatic and / or socio-economic changes in the past. An area of intensive settlement becomes transformed into one of vegetation cover. Macro-climatic and macro-edaphically based changes and historical events such as wars, disease and famines, represent the main ecologic processes driving landscape patterns and dynamics.

- Organically evolved landscapes: Continuing landscapes

They are represented mostly by agricultural landscapes. They include also villages with vernacular settlements surrounded by land-holding patterns of historical form which are still in use.

- Mixed sites: They have exceptional geological features with important religious or secular settlements on them such as landscape of Pamukkale-Hierapolis.

The archaeological sites can be considered as mixed landscapes defined as combined works of nature and of man and of outstanding of universal value from the historical, aesthetic, ethnological or anthropological points of view (in article 1 of the WHC). They are densely covered with shrubs and forests, in some cases with settlements, hence surface visibility is low until survey and excavation begins.

- Associative landscapes: Associative landscapes possess values deriving from religious, historical, cultural and artistically associations and reflections which help to connect particular concepts with our perception. They are the non-material resources of cultural landscapes.

Each landscape type is component of cultural landscape and the conservation of each type requires different approach by combining archaeological and natural resources protection. In fact, the landscapes continue in different forms like agricultural areas, built environments or nature parks while historical resources and

cultural traces drastically disappear unless they are integrated into this transformation; namely the continuity of the changing landscapes over time.

Interrelations between cultural resources and landscape conservation

Even if there are fundamental differences between non-renewable cultural resources and regenerating landscapes, common conservation issues are required for an effective planning an integrated management of both resources within the cultural landscapes as the overall quality is the sum of its parts. Within the nature conservation, in general, two types of conservationist approach can be mentioned (Shepherd 1992: 166):

- The holistic approach: It is concerned with protecting and studying the resource by sustaining the environment as a whole.
- The self-absorbed view: It is concerned with making use of the resource, for their own enjoyment, safeguarding that particular aspect of it retains in isolation. As a typical example, scientific activities can be illustrated. By means of holistic approach, it is possible to resist major threats to the archaeological sites within the landscape, while self-absorbed view is aimed at almost unique approach of preservation to the landscapes.

Landscape conservation can be applied and used in different aspects of conservation and planning options. These aspects can be pointed out as the following:

- Recreation as a social service,
- In land use management, open space conservation and land use planning,
- Civic engagement and cultural vitality as a supporting factor in cultural development,
- In urban and regional planning and cultural heritage conservation planning.

Archaeological research activities tend to imply the characteristics of self-absorbed view, particularly in the stages of conservation and presentation, however in recent years, the holistic approach towards historical heritage management and landscape planning has been applied including cultural and natural resource preservation. In addition, information determines the communal value of an object. Throughout the archaeological studies, the aesthetic experience should be taken into account within the relict landscapes, where historic features and values are imposed through material and cultural information as well as associations with the physical setting. [14]

In his paper, Shepherd (1992: 167) argues that up to the present, the two concerns archaeology and green (nature) have run in parallel and never converged.

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[14] Nohl (1995: 28): “Ein deutliches Interesse an landschaftliches Detail und an einer aktiven Beschäftigung mit den vorfindbaren Dingen, so macht man seine ästhetische Erfahrung mitten in der Landschaft.”

Due to the fact that the self-absorbed view still keeps in practice in terms of archaeological activities, the importance of the nature within the archaeological landscapes in terms of a holistic approach has not been deliberately taken into consideration yet. However, the awareness of greenery and nature preservation has been grown rapidly in the public awareness.

The organic[15] approach of Macinnes & Wickham-Jones (1992) to historical places recognizes not only the importance of heritage and its landscape in terms of their varying assets and qualities, but also the dynamic nature and organic development of landscapes as well. According to him that it is thought to be within a historically valuable landscape and study the surrounding area expanding out from the original point and allow the limits of outstanding historic interest to emerge by rigorous application of the standard criteria. Such an approach reveals the quantitative information determining heritage management and landscape planning for the planners that is generally lack of knowledge.

2.5 Re-defining the past landscapes

The term "*habitat selection*" (Rodiek 2003: 2) reflects the desire that humans have to replicate or stimulate the environment in which their ancestors have evolved. This idea indicates the core of exploiting and interpreting the resources and its environment by human influence in order to create a place of continuity, at least intangible values for the future generations. This idealized environment provides a supply of resources to give adequate levels of physical satisfaction and mental peace.

Elements of past landscapes always influence present ideas, although the messages of the monuments may be differently interpreted (Georgiadis 2003: 27). The concept of presenting archaeological sites within their wider landscape is also relied upon the contemporary uses and demands regarding the past cultural background. The design options on sites can range from re-establishment of ancient site to the purist ruins preservation. The latter is generally a very common way of presenting the ancient sites which involves the removal of vegetation, documentation and ruin stabilization. The design task can change the physical appearance of the sites either it is a historically based restoration and reconstruction or a contemporary concept of landscape design. In each case, landscaping the surroundings of the archaeological material on the historic core is a challenging task as the information about ancient vegetation and planting patterns seems to be very inadequate. It is highly imaginable and can be practiced in an interpretive-based approach. Nevertheless, some contemporary and historical articulated information evolve from the surrounding landscapes and the vicinity of site such as native vegetation cover, traditional planting patterns as well as topographical and climatic factors.

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[15] The term "organic" is meant to be the consisting of different parts that are all connected to each other: the view of society as an organic whole (Oxford Learner´s Dictionary, New Addition, 2002: 894).

Landscapes still reflect to a greater extent the ideas and way of life of previous generations. They reveal essential hints about the past landscapes and their uses which can be useful in re-establishing of archaeological sites. The recent archaeological investigations have also shown that the knowledge of the vegetation history is imperative to determine the degree of human impact on the natural environment and past land use. Moreover, interpreting the past vegetation provides the understanding of relationships between modern pollen production and the source of vegetation (Zangger *et al.* 2001: 89-104).

Additionally, landscape is endowed with distinctive visual and representational qualities which the spatial design and planning methodologies should take into account in landscape analysis. Forms in the landscape enable the viewer to perceive and interpret the past as well as the present. Particularly, architectural interpretations often call for attention in emphasizing important landscape features. For Bourassa (1991) integrated historical forms play a key role in determining the image of a landscape as well as in people's aesthetic evaluation of objects and environments.

In regard to landscape design the visual perception and spatial organization of landscape is one of the aspects intensified and integrated within the studies. Beside the physical dimensions of landscapes, sensuous forms, stimuli and feelings generate in the course of various processes.

All visible features and intangible values are potential factors required to be evaluated in the planning process. These factors should be mentioned in order to envisage the design and planning framework of an historical site.

2.5.1 Forms in the landscape

Forms in cultural landscapes are engraved with their unique spatial appearance. They have influenced the uses and functions of resources as well as human settlements and their composition. During the course of time these forms have modified and renewed the appearance and functions. Archaeological sites cover spaces with organic and inorganic forms, objects and symbols which are visible or buried. Relict landscapes are clearly recognised where archaeological features spread across significant areas of countryside.

Landscapes constitute "*intertextual sites*" (Terkenli 2001: 198)[16] in which the various kinds of spatial units exit. The visual as well as spatial compositions appear in various forms and scales which compose the character of the perceived environment. Topography, relief, vegetation, water, architectural structures and artefacts form the visual character of landscape. Landscapes change over time, resulting in the need for special considerations in the evaluation of integrity. Vegetation is an essential factor influencing the view and form of the landscape. In comparison to the cultural resources, they are temporal in context and scale.

[16] The term "textual" is especially apt here since it emphasizes the legibility of landscape as expressed through its visual and representational qualities.

Furthermore they are mostly affected by abiotic and biotic factors.

Space will acquire its meaning and senses, when the elements are combined with visual, spatial and cognitive aspects. The human perception recognizes the spatial form within its environment and reflects his knowledge and aesthetic understanding as a sensuous experience.

Yet it is the sense of place which enables the visitors to integrate into the space. Culture, temperament, experience, intention, aim of visitor affects the perception. Sense or aesthetical experience depends on these factors as well as spatial forms. Diversity, rarity, fragility and amenity are the features used by the designers in determining the objectives and planning.

In cultural landscapes, historical patterns are composed of various layers overlapping each other representing various shifts of periods (Gunzelmann 2001: 21). Because of this complex situation, it is not always easy to conceive the whole composition of that place. In many cases, at archaeological sites, it is difficult to comprehend the context. Hence, in the planning system it is useful to split the landscape into its forms, and then to compose the pieces again in order to develop appropriate design options.

Functions are abstract ideas in contrast to forms, and they are achieved through forms. In this connection, the relation between historical forms and the contemporary function of the areas are also focused on which causes conflicts in the heritage, nature conservation and exploitation.

Form of objects and environment which gives the shape of the entire landscape reveal partially the historical and architectural manifestation, as well as the attitudes and expressions of contemporary heritage conservation. The other factors vary through the importance of categorization which people-approve or disapprove-consider as of great importance or interesting.

For instance, historical values also play an important role in the evaluation of lay people (Ashworth 2000; Coeterier 2002).[17]

The evaluation schemes primarily refer to the material forms of landscapes and consequently to their visual qualities. Moreover, the aesthetic motivation was behind most of the earliest forms of protection of cultural landscapes which later has been turned into more ecologically rather than aesthetically. The main roles of visual

[17] According to Coeterier (2002: 115-116) form has four secondary criteria; beauty (material, colour, proportion), completeness, uniqueness and good workmanship. The historical forms reinforce the physical features of cultural landscapes regarded as aesthetic object of the environment, which in turn their perception emerges as the aesthetic experience in the landscape. According to an experimental research about people´ s evaluations of historical places, following statements were found out about aesthetical experience (Coeterier 2002: 116):

- The aesthetic experience is recurrent, but the effect of information is only once.
- The aesthetic experience is immediate and direct, information is through imagination
- The aesthetic experience is more attractive than informative presentation.
- The aesthetic dimension is integral to environment. It is bound up with the physical, historical and experiential aspects of an environment.

features in archaeology, leisure and conservation can be mentioned as the following:

- Encouraging a wider appreciation of the archaeological sites and perpetuate the sustainability of the relating landscape,
- Enhancing the landscape management, in both rural and urban environs through time,
- Developing parallel principals for recreational uses and for academic reasons.

2.5.2 Visual qualities and image of a place

It is of essential importance to address the physical landscape in its visual fashion in order to achieve adequate and in-depth coverage of its complexity, but even more importantly to emphasize the factors required in landscape study and planning. Above all, visual contact with monuments is of paramount importance; it enables the viewer to see, perceive and interact with the tangible and intangible values. Even if not accessible, historic landscape features may constitute a very valuable visual amenity in the wider landscape or for the setting of historic buildings.

During the cognition process of landscape, the cultural and natural elements can not be separable perceived. Visual importance of landscape characters the affect of the colour and form on visibility and visual attractiveness (Higuchi 1983: 65). It is that shape, colour, or arrangements which facilitate the making of vividly identified, powerfully structured, highly useful images of the environment. There are visual qualities in some landscape features which make them the inevitable subjects of attention, despite the selective power of eye.

Higuchi (1983) regards landscape with its visual and spatial structures, which is of essential importance in landscape design to grasp the nature of the setting as a visible spectacle and to comprehend the spatial structure integrating with the appearance of its physical setting in the landscape. The visual structure of the landscapes are analysed by the measurements of significant variables such as light, depth, distance etc. in order to find the optimal values to achieve a desired image. Higuchi attempts to formulate the space with an analytical approach in which the spatial structures are the substantial realities that make up the landscape.

The concept of place is closely related with its visual qualities. Lambrick (1992) argues that perceived importance can be closely related more to the quality and quantity of detailed information but above all its current appearance; namely perceived environment than its authentic character. These aspects derive from the history, traditional forms as well as archaeological significance and the associations about the site. Visual perception, senses and human experience play an important role in the planning process. A place retains its meaning to the extent that people continue to expect certain satisfactions (or dissatisfactions) implicit in behaviours contained (Jakle 1987: 4).

In this sense, perception at historical environments can be considered in three

broad categories:

- Visual aspects; forms of cultural and natural resources, and physical setting,
- Cognitive aspects; non-material qualities such as history, religion, mythological or ideological associations as well as informative presentations contained,
- Functional aspects; past and contemporary uses.

Visual approach should be involved in the planning concept where information is required to compensate the vanished historical features through interpreting and redesigning the physical and spatial setting of historical forms within their environments.

Another important factor relating the cultural landscapes are images. Each landscape has its own integrated cultural, visible and symbolic image. Visual conception impacts the senses which turn into images. Forms, colours, structures, texture, and scale create the complexity in the landscape through the careful manipulation. As people pass through a landscape their senses should be continually treated to the unexpected in order to sharpen the awareness. However, variety should not deviate too far from expectations, otherwise frustration or confusion will result. It is argued that places are endowed with messages through their association with the past and such intentionally coded messages are designed to convey specific ideas to designated group of users (Tunbridge & Ashworth 1996: 15-16). This is perhaps one of the present aerial differentiations to the questions of what makes places more than spaces. Because places are in a continuous state of becoming, this process is one of the main determinants of the individual character.

Apart from the visual and physical images, past and present symbolic images and their values reinforce the meanings and their perception. In analysing the image of historical sites and their landscapes, three factors derived from the concept of image can be pointed out as the followings:

- Identity: Characteristics that distinguish it from the others.
- Structure: The way in which the parts of something are connected together, arranged or organized; a particular arrangement of parts.
- Meaning: The thing or idea that a word, sign, etc. is represented. Meaning differs from user to user according to the qualities and values aimed. In terms of scientific activities, interests of the layman and tourists, and even residents, historical monuments and sites vary in their understanding of meaning.

The Aegean landscape, our case in point, is full with archaeological and mythological hints emerging from the past cultural and traditional tangible and intangible values; in particular plants[18] had been used to symbolize ideas, idealized environments and religious forms. For example; olive branch (*Olea europaea*) represents peace, Grecian strawberry tree (*Arbutus andrachne*) represents

[18] Gallipoli Peninsula Peace Park International Ideas and Design Competition. The Book. (1997) Middle East Technical University Ankara.

immortality whereas laurel (*Laurus nobilis*) symbolize success and power, oak trees (*Quercus coccifera*) and cedar of Lebanon (*Cedrus libani)* represent resistance, endurance and fertility, and myrtle (*Myrtus communis*) is associated with grace. The present-day image of the region is related with the commerce-oriented tourism image; holiday and leisure land. Positively, this should be connected with the cultural and natural qualities, traditional way of life and hospitality. Additionally, the topographical features identified in the landscape can generate wide range of meanings. The influences on the relationship between place-names and landscapes in England have been scholarly researched.[19]

Pamukkale-Hierapolis is a point in case. The name of the town (province of Denizli) Pamukkale (*Cotton Castle*) had been emerged from the landscape features and it represents the image of the site and its environs. Regarding the "historical landscape" image of Pamukkale-Hierapolis, the values can be categorized as the following:

- Identity: Archaeological site (ancient Roman city) with travertine terraces and waterfall.
- Structure: Ancient ruins and travertine pools are located in the same area; some of the ruins are in good state such as theatre, tombs and the thermal pool.
- Meaning: It can indicate different aspects. Generally historical places possess three following main aspects:

Landscape feature; physical features has affected the development of ancient city; thermal springs and water shaped the landscape of the region since ancient times.

Economical income resource; tourism is a major source of income for the Pamukkale and its environs: Tourism resource; it is a focal point for national and international tourists.

Table 2.2 Visual and spatial features of cultural landscapes.

Landscape resources		
Visual Structure	**Spatial Structure**	
	Physical features	**Resources**
Perceived environment Readability Spatial continuity Harmony/Contrast	Landscape elements Landform Land cover Topography Historical topography	Ruins and reconstructed monuments Landscape units Archaeological landscapes Archaeological sites Ecologies of sites

In Table 2.2, it is aimed to summarize the visual and spatial landscape features as structures of this unity. Visual structuring of landscape provides understanding and perception of the natural and man-made aesthetics in the historical landscapes.

[19] Dr. Margaret Gelling (1984) deals with the topographical and historical associations of place names recorded in Ekwall´s "*The Concise Oxford Dictionary of English Place–names"* (1st Edition 1936; 4th Edition 1960) in her book "*Place-names in the Landscape*".

Spatial structuring can be divided into its two components. Physical features are considered as the forms which archaeological landscapes occupy. Cultural and natural resources are the material and ecological structural facts in the archaeological framework. They relate with each other articulating interactions which the landscape values reveal.

2.5.3 Perception of past landscapes through design and planning objectives

The past shape the sense of locality, controversially places can be structured and planned deliberately to create such associations with a past. Archaeological parks, open air museums and spatial reconstructions epitomise the re-established and fictional environments and landscapes to fulfil the expectations of visitors. Thus, the place is the product of that heritage in a created historical landscape. The separation of the setting into its natural and man-made components in terms of spatial qualities can restrict the uses of intrinsic values in developing the planning potentials. Additionally, in perceiving the landscape, it is not possible to sift out the artificial elements from the natural elements. An ancient building standing solitary on the site can not represent its history and meaning without a setting.

In the last years, an increasing interest in landscape, landscape values and its assessment linking with the cultural heritage concept has opened a new approach to the landscape planning and design process. As the landscapes are based on dynamic and undergoing changes with a scope of different forms and uses, it is impracticable to specify the landscapes and meanings in terms of planning and design. Nevertheless, restricting to its various values and qualities deriving from intrinsic or extrinsic factors, it is of importance to classify the landscapes from the viewpoint of different issues.

In order to examine the archaeological landscapes with ancient forms in terms of planning and design, visual and spatial organization should be stressed with an analytical approach towards the study of landscape meaning and form. In view of landscape planning, the model of Terkenli (2001: 200-201) can be mentioned in which the relations and interactions between human environment and landscape constitute the base of the model. Landscapes contextualized through cultural and historical processes are revealed as material and information flow interwoven in real, perceived and symbolic ways. The legibility of landscape expressed as its visual and representational qualities is reflected as the spatial unit of human life and activity. In so far landscapes as multifunctional patterns require integrated sustainable management.

Landscape and architecture are very similar as they are both aesthetic objects which function as setting for human activity. The aesthetic objects of architecture are individual buildings and other man-made elements, while the aesthetic object of landscape is defined holistically to include the entire scene, containing any number of buildings, artefacts any natural objects, including people (Bourassa 1991: 16).

Historic places are important aspects of environmental design. According to Lynch (Banerjee 1990) the designers are prohibited by the traditional preservation procedures which restrict their creativity. In fact by the help of basic natural materials, such as plant material, new confrontations with the historic districts can be created in relation to their perceptual context. Lynch (Banerjee 1990: 630) stated critically:

> "Preservation is not just saving buildings but the use of an entire landscape to symbolize the floe and eddy of events...to use the physical environment to change the experience of time, to enrich it and to structure it in some valuable way."

Historic environments possess valuable codes and meaning. Conserved as heritage they are parts of a common culture of the world. Lynch (1981: 138) states that identity and structure are aspects of form which allow us to recognize and pattern space and time in themselves. For him, congruence, transparency, and the legibility are components of sense which describe explicit connections of the settlement form to non-spatial concepts and values (Lynch 1981: 141). Design practices aim to create the link between the historical values and physical planning. In doing so, the sense of the environment should be fitted with the visual character of the place.

2.6 Cultural tourism

Tourism is an activity which leads of journey out and home again during which several or many places are visited. Therefore it is a system of services for leisure activities with a scope of journey experience. The natural and cultural features of urban and rural areas are the focus points of tourism.

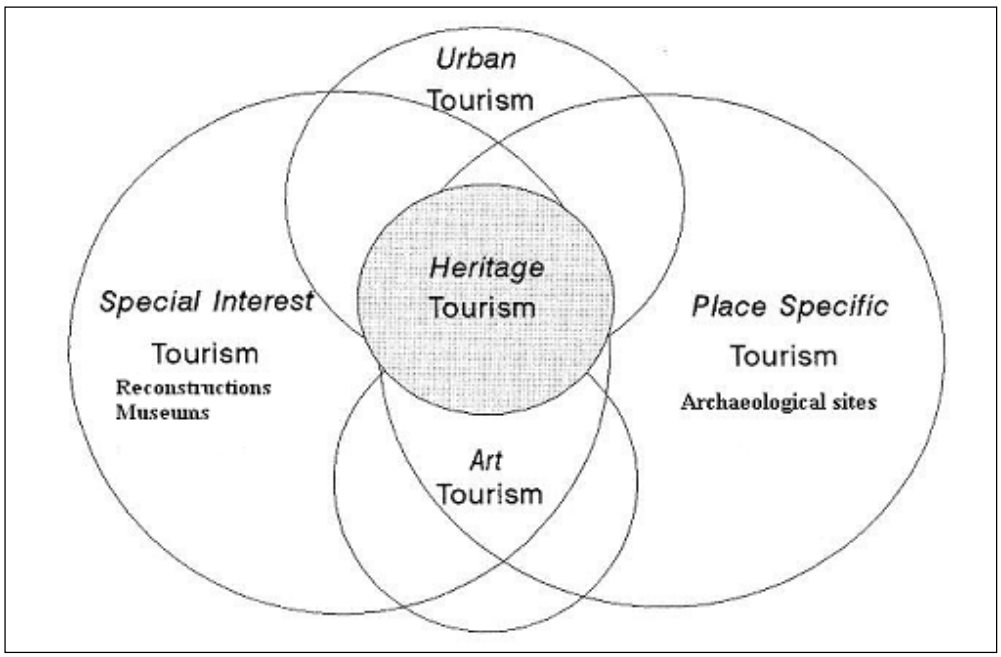

Figure 2.2 Tourism according to the interests and resources (After Ashworth and Tunbridge 2000: 56, "The Tourist-Historic City: Retrospect and Prospect of Managing the Heritage City).

They are directly or indirectly used and exploited in terms of tourism facilities. Cultural features provide tourist activity[20] using aspects of history and physical survivals of the past. In fact, heritage tourism overlaps between two large general categories (Figure 2.2).

The archaeological sites and monuments in the countryside serve a "*place specific tourism*"[21] combining the natural facilities within their historical setting.

Relict built environments such as archaeological sites and landscapes are the most popular destinations of tourism in Mediterranean countries. Here, the beach-oriented tourism benefits the growing popularity of the heritage tourism. Although most of heritage visitation is an ancillary tourism function as a part of an overall holiday package, its influence appears to be a great success. It is certainly the attraction of nostalgia, which is individually experienced and interpreted through the past cultural forms and landscapes. Schmidt (2000) refers to the fascination of "*past*" insofar it is displayed in a clear and descriptive way. For him, recreating and experiencing the past anew has been turned into an exciting recreational activity. In this regard, in order to emphasize the significance of historical events, "*staged*" authenticity is created. According to Schmidt, it is a "*faked*" authenticity invented to establish a connection between the contemporary demands and historical production by means of entertainment. Cultural practises can eventually become embedded as important traditions in the contemporary society, yet their origins have been forgotten or romanticized. Archaeological sites are the cultural products recreated by new combinations of cultural products in terms of scientific interventions and conservation measures. In this respect, contemporary demand as visitors´ desire is the criterion forming the quality of heritage product.

Cultural tourism has been developed as the attention was paid to the potential for tourism and recreation in the city centre. Positively, this has emphasized the spatial quality as well as the built environment. In this connection, new forms of leisure activities based on cultural resources and history of the city and its environment intensified the tourism concept. Hence, tourism is the most obviously important use of heritage as an economic resource. Tourism serves as a means to bring the heritage to the consumer. In addition, it is increasingly appreciated as a positive force for natural and cultural conservation.

In recent years, particularly cultural tourism has gained increasing attention in which their various aspects are discussed by different authors (e.g. Ashworth & Larkham 1994; Herbert 1995; Chhabra *et al.* 2003; Poria *et al.* 2003). Authenticity is an important attribute in cultural tourism. According to Porio *et al.* (2003), it doesn't

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[20] See about the concept of tourism and tourist behaviour: "The tourist", MacCannell, D. (1976).

[21] Ashworth & Tunbridge (2000: 56-57) describe tourism in two categories; special interest and place specific. Place-specific tourism is where the tourism attraction is the genius loci itself; the sense of place which may be composed of many broadly defined cultural attributes, including common sets of values, attitudes and thus behaviour. "Special interest tourism" appears where existing interests are continued on holiday. In many cases cultural tourism is a "place specific tourism" where attraction is the unique identity of the destination to which heritage makes some contribution. Or, they may be secondary diversions on holidays primarily motivated by quite other attractions.

even depend on specific site attributes. Similarly, Chhabra *et al.* (2003: 703-704) maintains that high perception of authenticity can be achieved even when the original source does not exist anymore. Specific locations of past events may also be valued even if physical traces of its existence have not survived anymore. To perceive authenticity, there are different factors concerning the heritage such as location, story of history, environment, and physical conditions. For example, while the one who has seen Pergamon Altar in Berlin Pergamon Museum embodies other qualities before he visits the original location of Pergamon Altar on the archaeological site of Pergamon whereas the one experiences it quite different on its vacant location for the first time. So at one level, the heritage product is a particular service, but at a deeper level it is an intangible experience. In addition, because heritage tourism has an educational role, the more learned, the more discriminating the tourist becomes (Chhabra *et al.* 2003: 706).

2.6.1 Functions and uses of tourism

To a great extent, heritage as a demand-defined product is shaped according to the expectations of the visitors. However, a "typical tourist heritage" can not be created which would be unfamiliar to the senses and character of the place. Furthermore, tourism is particularly spatially selective. It tends to cluster strongly in relatively compact areas and be located within linked networks of similar attractions at various spatial scales. Another factor is the time-space relation which impacts the visitation and accordingly spatial visitor understanding and behaviour. An organized coach tour to the archaeological sites is a typical point in case. These are ´cultural` tour groups visiting sites and spending half an hour in a hurried and unprepared tour before buying their souvenirs and boarding their buses for their next destination. Not only are such activities defined by typical tourist behaviour[22], but also perceived qualities and provided facilities are also quite reduced. This in turn leads to differences in the quantity and quality of the heritage places as well as in methods of exploitation and presentation. The reduction of the complex past to a set of recognisable characteristics causes rapid assimilation of heritage, limited knowledge and quiet definite expectations about heritage (Tunbridge & Ashworth 1996: 24).

Cultural tourism tends to lead to a selectivity in which the heritage is turned into a "*demand-defined*" product. Manipulations of the information and intensive marketing of cultural resources are only one of the reasons leading to this negative development in its context and spatially. Tunbridge & Ashworth (1996: 66) classified three factors affecting the tourist approach towards cultural tourism and consequently the tourist activities:

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[22] The heritage tourist can be distinguished from non-tourists or tourists motivated by other type of attractions in terms of personal characteristics, behaviour patterns and attitudes. Two (tourism) user types are mostly seen. One of them is "*intentional*" tourists who are aware of the historic character of the place. The other type is the "*incidental*" type who visits by chance (Ashworth & Tunbridge 1991: 119). There are numerous detailed surveys of tourism researches relating with the classification, description and comparison of tourists (Burtenshaw *et al.* 1991; Butler & Pearce 1995; Chhabra *et al.* 2003).

- Quantitatively: Tourists use a particularly small portion of the potentially available heritage sites and resources.
- Qualitatively: Tourism tends to select the large, spectacularly or internationally unique over the smaller or more commonplace.
- Spatially: Tourism is particularly spatially selective in that it tends to cluster strongly in relatively compact areas and be located within linked networks of similar attractions at various spatial scales.

According to Newby (1994: 209), tourism and heritage coexist when tourism does not dominate the local economy. Basically a place functions on its own terms even though the number of tourists may be large. When the tourism is the main profit of a region, the relationship becomes exploitative. Its most visible disadvantage is the enormous physical pressure of visitors it induces at particular places and particular times. Venice, Rome, Acropolis in Athens and Ephesus are one of the famous examples for this phenomenon.

2.6.2 Cultural resources as a means for tourism development

Cultural resources as heritage are, to a great extent, bounded with tourism, so that their past and future existence occurs from their interrelationship. The present-day survival of archaeological sites isolated in the rural areas is provided through tourism activity. But above all, the development of archaeological sites as a tourist attraction and recreational centre has brought a measure of prosperity to the region and given the sites its economic value. The coexistence of heritage and tourism in terms of economic profit of local communities is conceivable, unless the cultural selectivity is dominated by the tourist industry. There is a growing body of evidence, that the integrity of cultural tourist destinations with living environment should be a prerequisite for the appropriate development of physical and spatial as well as economical continuity of the region. This is one of the objectives of the planning proposals.

Tourism facilitates the sites and areas a new structure, function as well as usage. Especially in less favoured areas, heritage conservation may be a strategy to enhance an area, capitalize on its own individuality and attract inward investment. The benefits obtained from tourism provide many facilities to the region, in particular to the local communities. The municipality, tourism industry, local businesses and the national treasury benefit directly or indirectly from archaeological places. Particularly, it supports employment through commercial investigations in national and international scale. It is a known fact that many countries obtain large sum of foreign exchange from tourism industry. The sites on their own can hardly benefit from this economical support and the authorities who are responsible for the protection and maintenance of the site derive little direct return from this bounty. The insurance of mechanism can only function in which the entrance fees are directed to the sites at a local level to finance their conservation and maintenance.

In recent years, it was of great importance to reduce the impacts on natural and cultural resources in terms of environment sustainability. This in turn reflected to the cultural tourism and its landscape. Balancing the uses of both resources as a means of planning strategies in sustainability of resources has provided to develop a new approach which relieves the pressure upon them. The suggestions and the means to find a solution require a compromise of both using and preserving of these resources.

2.6.3 Archaeological sites and tourism

There are unique and specific focal or magnet points for tourism and one of them are the archaeological sites. In fact tourism is implicit in the idea of archaeological site presentation and preservation.

Archaeological sites in the countryside are mostly places that one passes-by, rather than a final destination. Hence, they are faced with problems like transportation, lack of quality of roads and infrastructure. Consequently, the raising interest leads to new measures and tourist facilities to be undertaken as archaeological sites can receive large numbers of visitors owing to the spatial and physical dimension of the its layout. Controversially, tourism is an essential factor to maintain the development of the archaeological sites and its locality as well as the decision-making about the future of the heritage. It enhances the qualities of the region and the heritage. Like in many historical places, also in Ephesus, the increasing number of visitors led to the construction of roads to connect the ruins with the city and this accordingly enforced the presentation and preservation measurements. Additionally to this, it is a powerful source to enhance urban qualities such as construction of appropriate infrastructure, maintenance of services, greening of the public spaces etc.

In some extent, today's visitor approach to the ancient cities has shaped the archaeological works. Visitors have a preference to see at least partially complete restored or reconstructed objects with impressive presentations rather than romantic ruin environments which demand imagination and fantasy. In Ephesus, since the completion of the restoration of Celcus Library, it has become one of the landmarks of Ephesus and the primary attraction for the visitors. This heritage is well-known in such a manner, that the area in front of the building and the main street has turned into a meeting point for the tourist groups.

In contrast to Ephesus, archaeological site of Aphrodisias receives quite less visitor, even though the organization of the area and the site facilities are in a better condition. However, the archaeological site has not contributed to the economic wealth of the adjacent village, but in the long run it tends to develop the regional economy. These are tourist districts which are generally isolated from the local community and exist in the rural regions. Thus, the average visitation dependent on time-space factor is mostly drawn to the site. Inevitably, the potentials in the city are neglected and the profit of local community is quite intercepted.

These facts all indicate that the tourism uses of heritage can shape the physical, spatial and structural relationship of elements within their environment through selectivity and preference factors. Therefore, heritage tourism is in many respects strongly related with the facilities that compromise holiday experience and demands of users. Different attitudes of visitors towards history have implications for the selection and interpretation of heritage specifically designed for presentation to tourists and also for the extent to which perceived dissonance (historic or fantasy) can be tolerated (Tunbridge & Ashworth 1996: 65). However, tourism can not be defined in terms of the activity itself. Heritage visitation can be generalized as a recreational activity at particular places, and it is one of the usages in terms of heritage product. As the historical resource facilities are multifunctional and consumer is multi-motivated, it is inevitable that this provokes contradictory reactions and situations.

Sacred sites and places serve as religious tourism which is increasingly linked with cultural heritage tourism (Rinschede 1992; Digance 2003). Formal sacred space is mostly associated with temples, cathedrals and palaces (Digance 2003: 145). In addition, the natural resources and the landscape surrounding the heritage is also an important locus for sacred and ancient sites. Heritage sites endowed with belief values, as modern secular pilgrimage, present not only a magnificent edifice which inspires awe, but also they reflect the cultural history and may retain modern religious significance (Herbert 1995: 9). St. Nicolas Church in the south of Mediterranean region (Kaş) and The House of Mary in the proximity of Ephesus are visited each year by many pilgrims.

The phenomenon of historic attractions is not the presence of visitors at the sites, but rather the scale and effect of visiting. In this sense, the attraction of heritage should be directly relevant to the visitor capacity of the site including its relating facilities. It is commonly known that the heritage attraction factor raise the public interest and awareness, accordingly the scale of visitations. Due to this combination of factors, heritage sites should be planned not only to make it accessible to the public regardless the visitor factor, but also to take attention to the state of site and its landscape relating the heritage resources.

2.6.4 Tourism industry versus archaeological sites conservation: Problems and challenges

Arguably, the tourism industry may be one of the most serious challenges that the archaeological heritage faces. But, in what extent do tourism activities challenge the existence of archaeological sites? It is a fact that archaeological sites including historical and natural resources are not sustainable for the future in their most recent appearance which the archaeological work has shaped. Additionally, the preservation strategies can cause complexity for the contemporary interest and usage. Conservation, management and presentation afford one common concept in which the strategies should function together. Capacities and interferences should be

evaluated in a regional scale. It is a combination of natural environment; sites, thermal baths, cultural and ethnographical values such as landscape, shores, sea, forests, flora and fauna composing the components of a coordinated and planned tourism approach. The required facilities and attractions to draw tourists lead to extend beyond the archaeological material which is yet supportive for the site uses, but also they can easily erode the historic fabric. Inevitably, spatial changes can occur through development of tourist facilities; a new urban layout derives from tourist facilities, countryside landscape alters its natural character due to the complementary services such as hotel, restaurants and shops.

The object conservation has changed into the environmental action, environmental intervention. In fact, from the point of both sides, namely the producers and the consumers should share the uses of heritage in terms of its different values. As the values reveal different aspects of attention towards the heritage uses, a wide spectrum of scope studies including preservation, presentation, management aspects should be provided for a positive contribution. Certainly, the efforts are to ensure the sustainability of the survivals of the past. Yet, problems arise in both conservation and maintenance, when preservation tends to assume the archaeological resource as an end product. Due to the progressive domination of tourist service functions, spatial and physical impacts on the character of heritage environment arise. This is caused not only by mass tourism, but also the lack of a progressive planning concept of the region within the heritage. Selçuk (Figure 2.3), the modern town adjacent to Ephesus, epitomises a small-scaled city, yet which is rich in cultural resources as an example of positive impact of tourism facilities. However, some problems are still arising to be solved.

The first and common issue is that the local community can not profit enough from the high amount of tourist visitation. Accordingly, the accommodation is in very low percentage comparing with the day trips to the culturally and historically important sites as well as monuments and museum. In this respect, Selçuk has turned into a tourist transaction point owing to the historic nature of its rural environment and the holiday resorts in the proximity of city and cultural heritage.

Similarly, Ephesus is estimated to receive 1,5 million visitors each year. The increase in tourism was the impetus for the extensive use of the site, in particular the main ancient street, theatre, stadium for Ephesus. In Ephesus, inevitably mass tourism has diminished the quality of visitor experience, and caused the deterioration of the monuments. Excessive visitation of specific monuments disturbed the visual unity; the meaning and significance of the ancient city and the landscape which should be contributed to the visitors are neglected. The maintenance of the site can not be provided by closing off periodically some of the monuments and preventing the visitation. Although the high amount of entrance fee, the national as well as international tourists are flowing to Ephesus and its environs. The similar problems can also be noticed at Pamukkale- Hierapolis.

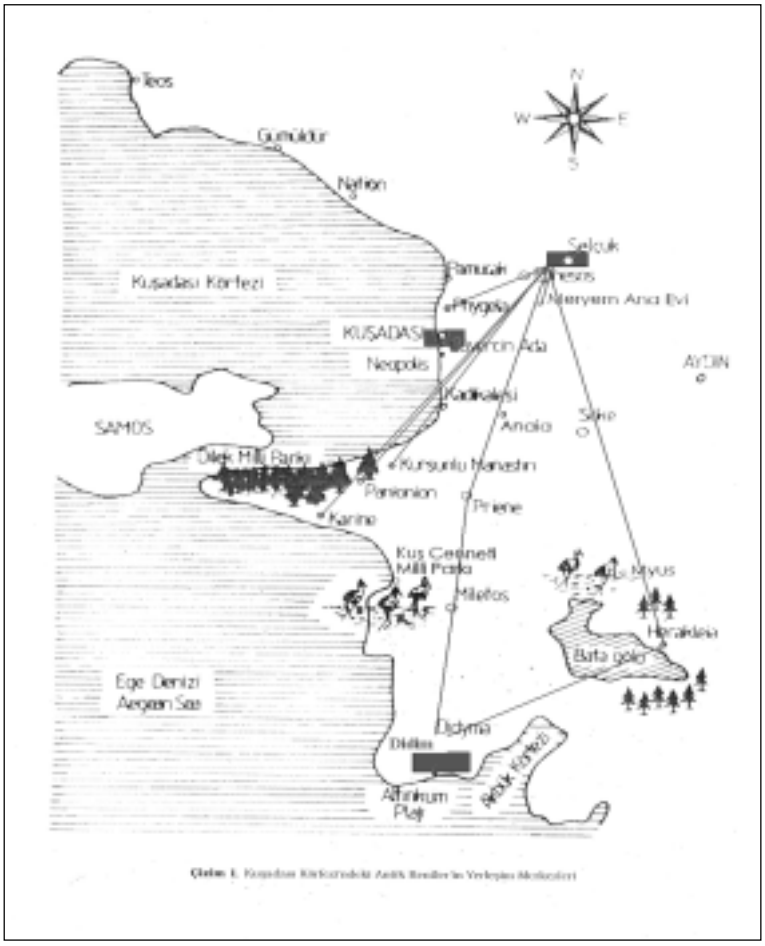

Figure 2.3 Location of the archaeological sites at the southwest of Turkey (After Soykan 1998: 184). The modern city Selçuk and its environs are regarded as an important tourist-historic region: Ephesus, Priene, Miletos, Heraklia (Bafa Lake) and Didyma are located in the proximity of Selçuk and the coastal holiday villages Kuşadası and Didim. Beside the natural resources, the rich archaeological heritage has led to tourist expansion that accordingly raised the percentage of tourist accommodation in the recent years.

On the other side, ancient cities such as archaeological sites of Sardis or Priene receive visitors less than half of this amount in Ephesus. Even in winter months, there is interest from national tourists in particular. As a comparison; Ephesus has received 25,001 national and international tourists in January/February 2004 whereas Pergamon-Acropolis has received 5,936 and Pergamon-Asklepion had 3,406 tourists. The Museum of Ephesus has received 5,644 visitors whereas Bergama Museum had 607 visitors (from the report of Ministry of Culture). Certainly, that does not indicate that these sites have less significance than the others, but they have lack of marketing strategies in tangible and intangible means. Though, this prosperity should be envisaged with positive as well as negative aspects. Selectivity, spatial clustering and concentration are the three factors which lead to the physical pressure on the heritage resource. The impact of a magnet monument on the use of a site can be significant but on the other side, the existing of such imposing monuments has the further effect of encouraging excessive visitation to some parts of the site while leaving others neglected.

In this respect, the creation of infrastructure on the sites such as access routes,

parking areas, shuttle systems and the visitation plan at the sites are indeed necessary and functional, as long as the exploitation of ancient cities and monuments take place in a modern context with mass tourism. It should be harmonised with the modern necessities of life standards, but it is often neglected. To envisage today's modes of activities in the sites will bring prospects to the region also.

Newby (1994) criticises the selectivity of conserved and presented heritage through the benefit of tourism. He (1994: 218) states:

> "The danger for conservation arises because of tourism's selectivity. Particular problems arise, then, for tourist centres which have evolved through many periods and which have areas of conservation value from a sequence of periods. The heart of the danger is that commercial pressures exerted through the tourism industry may lead to public investment in conservation being directed disproportionately to support the tourism economy".

In this sense, heritage tourism is a phenomenon based on visitors´ motivations and perceptions rather than on specific site attributes (Chhabra *et al.* 2003: 703). This concept can be enlarged that the conservation process exerted on displayed sites is also a part of this phenomenon which leads to commercial pressures as well.

To sum up, tourism is an important instrument in shaping social and physical structure in a region. Alterations in the structure of land use are inevitable when tourism tends to dominate the localities and become an essential industry there. In accordance the regional facilities are obliged to grow more of their own features including natural and historical resources with a rising demand. It is recognized that the natural and cultural features of urban and rural areas are the focus points of tourism. They are directly or indirectly used and exploited in terms of tourism facilities. The rising demand for historical sites within the tourism and accordingly leisure seems likely to continue. Thus, in the recent years there has been an increasing concern on the impacts of intensive tourism usage on the archaeological sites in Mediterranean countries. On the one hand tourism and tourists are important components on the site which is important for the sustainability of heritage as well. On the other hand it raises problems concerning its protection, maintenance and management.

As a result, the effects of tourism development on archaeological sites can be divided into two parts. Firstly, it is of necessity to promote archaeological sites within the tourism. The necessity of tourism relating with the cultural resources can be summarized as the following:

- Generating economical possibilities; job creation and eradication of poverty for the region,
- Improving place and environmental qualities; services, community facilities, public transport,
- Raising awareness of public to historical resources, their preservation and related common social, economic and environmental problems,

- Sharing and transferring knowledge, and experience through visitation,
- Creating leisure amenity,
- Conserving and management of heritage,
- Ensuring the cultural landscape on a sustainable basis.

Secondly, tourism causes negative impacts directly or indirectly on the archaeological and natural resources sites. These can be summarized as the following:

- Exploitation of the resources,
- Threatening the historical evidence,
- Creating additional commercial pressure,
- Selectivity of heritage,
- Pressure on natural environment through increasing traffic and new constructions,
- Disgracing the environment due to the mass tourism and its associated impacts.

In conclusion, public interest in past cultures appears to increase in connection with their environment. The main objective is to balance the needs of archaeology, local interests such as farming and other economical enhancement, nature conservation, landscape aesthetics and visitor demands. Specific management plans are required to set out the appropriate measures concerning both tourism and preservation. Such plans involve consultations of various disciplines as the sites cover a wide range of subject matters and various components are affected.

Summary

In Chapter 2, the complex relationships between cultural-archaeological landscapes as well as human and natural influences regarding the evolution of archaeological heritage have been explored. The definitions were treated in a holistic manner to emphasize the meaning of landscapes and their association within the archaeological sites.

It is recognized that the modern contemporary landscapes contain an abundance of archaeological remains of many different dates and purposes. They contribute to the understanding the evolution of the spaces they occupy, and in some cases they continue to influence contemporary action, and give texture and character to the modern landscape (Darvill 1997: 79). Hence, cultural landscapes possessing archaeological context are as important as heritage itself, and the cultural materials are widely regarded as components of this landscape.

The key objective should be to consider natural resources and cultural heritage as two complementary and, to some extent, integrated realities in which the characteristics of past and present can be presented effectively. Hence, it is of essential importance to understand the evolution of archaeological landscapes and

their inherited values in terms of protection and planning strategies. Figure 2.1 (see p. 21) indicates that the cultural-historical landscape is a contemporary phenomenon interacting with the present sense of place.

Sites and their associated landscapes are endowed with intrinsic natural and historical values. Accordingly, integrating the aspects of landscape in terms of visual appearance, harmony of forms and vegetation into restoration and presentation practices is a prerequisite. This represents a real challenge because of the need to understand vegetation-archaeological environment of past and present interactions at this scale. Although it is not easy to reconstruct an exact physical and spatial appearance, the surrounding landscape enables planner to suggest traces that might have been of particular significance. As a means of an appropriate landscape planning and design patterns by landscape architect, the effective presentation and site-use can be provided which in turn should be complementary to the integrated conservation measures.

At the same time, historical resources form an equally critical part of a growing tourism industry (Ashworth & Tunbridge 2000: 3). This aspect is based not only on the urban forms of the past but also on the intrinsic values of landscape and associated values. At this point, therefore attention must focus on the role of presentation of the duo “cultural heritage-landscape” by means of design patterns varying according to the features of the site. Maintaining harmonious significant landscapes which are characteristics of the harmonious interaction of people and land provides opportunities for public enjoyment through recreation and tourism as well as for economic activity of these areas. This requires visually and historically sensitive landscape design with a sophisticated tourist appeal. In this respect, cultural tourism is also mentioned as an essential aspect expanding the scope of archaeological sites. Tourism is considered as an important asset in planning options and presenting the archaeological sites.

3 ARCHAEOLOGICAL SITES and LANDSCAPE

3.1 Protected Landscapes: Archaeological sites and their environment

The historical sites accessible to the public are generally called archaeological parks, national parks or open air museums. They reflect history and archaeology in spatially bounded spaces. Consequently, a sort of park-like situation emerges in the boundaries of archaeologically restricted area. In this case, it is considered as a particular section of land controlled and protected by specific legislation and local policies. To an extent, archaeological site can be considered as a cultural-historical park where in situ displayed archaeological findings are the built components and the natural environment encompasses this ensemble. By all means, the activity scope and usage forms of such parks are restricted, as the structure and spatial order has already been formed, and modified during the excavation works. Accordingly, visitor types and behaviours have a scope of relevant uses based on the resources and facilities presented on the site. A clear set of decisions in the planning of these sites are of crucial necessity as the heritage development becomes more and more important relating closely with the tourism and urban development.

The sites of archaeological significance appear in different forms. Some are included in living urban ensembles, part of a site continuously occupied where a contemporary population is active: the historic centre of Rome, Athens, İstanbul, and Vienna are some examples. Historical areas in urban settings shape the cultural, architectonic and the social composition of the urbanized environment. Others are isolated and have long been deserted by their inhabitants. In the countryside, the archaeological environment has also constructed an archaeological landscape through interactive influences, which is a backdrop against which archaeological remains are plotted (Ashmore & Knapp 1999: 1). Some of the sites possess important natural values or religious traditions. But they contain valuable in situ cultural and natural information which represents living history that must become integrated into the social and cultural fabric of the region as well as its economic life. Tourism is one of the tools establishing a tourism-historical place where the cultural landscape is particularly dominated by archaeological sites or land formations.

In some cases, ignorance of the archaeological and historical significance of a site most often explains the damage done to cultural property by local populate. In rural regions, archaeological sites are not generally connected to the larger community; therefore they are the sites that one enters consciousness if one makes a specific effort to visit the archaeological site in the first instance. Therefore, archaeological interventions and tourism development at local scale affect both the local awareness of the cultural resource as well as the archaeology as being integral to the daily life of community.

Additionally, as a quality of physical urban setting elements, natural and cultural resources serve to ensure the continuity of tangible and intangible values and

reinforce the sensuous form of cultural and socio-economic terms, thus they should be envisaged by means of planning measurements for the future. In this context, the presentation of these forms is the communication of historical built environments spaces with its environment and user through conveying the quality of visual structure of activity in forms of cultural heritage.

3.1.1 Structural and functional classification of archaeological sites

Archaeological sites can be categorized according to the presentation of the excavations. First approach is to display the results of excavations in a purist way, second one includes restorations and even reconstructions that are often practised on the site. Third approach is a fully reconstitution presenting on full scale the long lost monuments that archaeological research allows us, insofar their layout and system of use is concerned to display. However, it is of essential that a good interpretation can help integrating the remains into the archaeological and natural context. First and second approaches are based on the excavations conducted on site; visible remains are opened to the public in a sort of archaeological excavation landscape. Generally, a simple routing orients the visitors on the site. Archaeological parks, in contrary, tend to represent a specific period of the settlement regarding its significance in architecture or agriculture at a working and experimental landscape. The artificially shaped structure as the unique possibility of enlarging their exhibits and the variety of activities enable them to sustain the activity and interest lively in a contemporary way of understanding. Finally, the goal of any such park should include education and increasing of public awareness of archaeology and the preservation of cultural and natural resources.

Archaeological sites can also be classified according to the contemporary qualities of their resources and uses. They range from organically evolved to highly orchestrated in their development. Ashworth & Tunbridge (2000: 155) define this as "*demand-based*" and "*resource-based*" heritage sites. *Demand-based* heritage sites can be established to meet the needs of archaeologists as an experimental research field as well as to create a three-dimensional pedagogic environment to in which visitors can acquire a sense of past. Reconstructions and, in extreme cases, recreation of a settlement can be given as examples for this type of heritage sites. In Germany Saalburg in Taunus/Frankfurt and the Archaeological Park Cambodunum in Kempten/Allgäu as well as York Viking Center in York England are such partly reconstructed sites. *Resource-based* heritage sites, in contrary, are based on the preservation of inherited material and display it in its current state. In the Mediterranean region, there are many sites rich in remains of ancient Hellenistic and Roman cities and the archaeological resources are rich additional to their high physical and visual qualities. The historic resource is mostly extensive and complete so that the urban morphology should be enhanced with other concept rather than new structures. The most obvious characteristic of the archaeological resource is that it is site-based. They are site specific, thus they are combined with the features of the environment and landscape. In comparison to urban sites of archaeological

significance, rural areas are not easily accessible. The context is wider and the visual perception comprises bigger perspective. The image given to the archaeological site is in the interest of the scientific purity and extreme prudence remains a completely idealized, partially abstract, may be a theoretical one.

Another approach towards constructed or built archaeological parks concerns with the amenity character that archaeological parks give the opportunity to introduce the positive concept of living archaeology in a working landscape still, in which the presentation is focused on the daily life style at those times, rather than the history of vanishing from the surface. In a way, this may be one of the explanations of the great interest to the archaeological parks, in which the public demands to see something partially imaginary and pleasing than the sheer reality of the past events.

Archaeological Park Xanten is a case in point. The planning principles of Archaeological Park Xanten (Dommers 1991: 58-61; Schmidt 2000: 55-58) at Niederrhein were mainly based on the concept of partially reconstructions. The aim was to preserve the archaeological landscape consisting small number of ruins remained from the Roman civic settlement of Ulpia Traiana in 100 A.D. As the area was threatened by industrial development leading to the total destruction, a concept was developed to create an area of leisure activity of historic interest by means of archaeology and cultural attributes preserving as well as enhancing the qualities and significance of the site. Despite the offensive critics of historians and archaeologists, the landscaping for the area was planned and implemented by an interdisciplinary team including landscape architects jointly with the archaeologists. The contemporary situation required new creation of architectonic structures integrating with existing landscape properties. The usage of reconstructions set out to create active or passive participation as a part of presented leisure activities like concerts at the theatre. According to this viewpoint; the “contemporary” past, that is to be experienced in a contemporary way, enables the visitors to learn by watching and participating.

In future, restrictive measurements will certainly be carried out to prevent the destruction through excessive usage of ancient monuments. Doubtless, the public interest is more in the appearance of archaeological artefacts, so furthermore compensative attractions should be created.

3.1.2 Importance of archaeological contribution to the landscape studies

The first studies on the archaeology and heritage preservation had less interest in its surroundings and landscape. The traditional interest was directed towards individual elements of the landscape, ancient monuments and buildings. Consequently, the cultural material was not considered as an integral component of the surrounding landscape. Today the landscape factor reveals a wider scope in the conservation studies. Increasing emphasis is now being placed on a comprehensive historical conception of the remote landscape and its preservation. Above all, by means of greater mobility, historical places such as ancient sites at countryside lead to a

greater emphasis on history and continuity.

Archaeology has recognized that the landscapes encompass relics of former processes, yet many are still working so that the ruins have become integrated elements of the landscapes. Archaeological research is a long-term process as cultural landscapes are the base of resources for the research of the historical, archaeological site and artefacts. And, the uses of a cultural site often evolve in the course of time.

Furthermore, archaeology has incorporated attention to space and landscape, which has expanded its role from passive to active in shaping the human life with respect to its culture. As an example, landscape archaeology has been developed to investigate the relationship between the structural and spatial features and the environmental aspects. It attempts to search for the past planting and vegetation patterns, as well as agricultural behaviours. In part, archaeology is also connected with the urban and rural planning as historical built environments are now considered as an essential part of land-use planning. Consequently this requires much closer integration of cultural and natural resources, and of functions.

Archaeological knowledge is based principally on the scientific investigation of the archaeological heritage. In ICOMOS Charter for the protection and management of the archaeological heritage[23], it is also mentioned that in exceptional cases excavation can be carried out on unthreatened sites in order to interpret them more effectively for the purpose of presenting them to the public. Excavation must be partial, leaving a portion undisturbed for future research (Petzet & Ziesemer 2004: 104-106). The presentation of archaeological sites provides to make a link between past and present. Archaeological landscapes are the transformations of relict cultures.

The potential contribution of archaeology to the understanding of landscape can be summarized as the following:

- Archaeology interrelates with the flora, fauna and topographical form.
- Archaeology identifies aboriginal and natural assemblages and landscapes and rates of change of landscape in the past), introduction and extinctions.
- Archaeology provides an understanding of the relationship that exists between humankind, fauna, flora and landscape.

3.1.3 Archaeological sites of present-day and their constant relations with human and nature

A site compounds different ingredients of concepts beneath its weathered aged surface. A whole variety of present and past visions are encapsulated in the physical place. Archaeological works focusing on the built structure often destroy the surface.

[23] Prepared by the International Committee for the Management of the Archaeological Heritage (ICAHM) and approved by the 9th General Assembly of ICOMOS, Lausanne in 1990.

The new appearance resulting from changes in excavations impact also the topographical features and the quality of landscape. It is often forgotten that a setting or building is always connected with its environment. Therefore, the present-day form of a site has derived from mostly the present undertakings which lead to another approach in defining the characteristic of the site. The ancient site is not a city, a pagan or religious settlement anymore. So do the relating usages and functions. The contemporary *"genius loci"* of a place, therefore, has gained associations within its history and formation, but it has been shaped according to the present assets. The raw material of which heritage is composed is principally the preserved ancient architectural forms that have survived in the contemporary landscape. Nevertheless, this reflects the fact that it is one of the interacting elements in the landscape which makes the characteristics of the site more than scenery. Anagnostopoulos (1975: 147) states that the relation between any true work of architecture and the environment, it will be placed in is not merely a matter of scenery; it is a very complex and deeply organic relationship stemming from the overall visual, functional and structural dependence of the building on its site, a dependence which is ecological in character.

The work and accordingly the planning on sites are incomplete as the possibility of new excavation can be always estimated. There are technical and philosophical reasons and handicaps making the issue challenging. The stabilization of the site is the most challenging part, because;

- Enduring construction is not possible as long as the excavations are not completed,
- Fabric and material is non-renewable source and not possible to reproduce,
- The cultural resource is immovable and presented at its own place,
- The contemporary physical and historical character of the site consists of a new quality, since the original functions had been disappeared and the site has been excavated and modified through the archaeological research and the organic development of landscape in the course of time,
- It is an incomplete structure,
- Fabric is fragile, especially at excavated sites,
- Unlikely historic structures, archaeological sites can not be re-inhabited or reused (partially grazing, agriculture etc.).

Archaeological Resource Management

Concept of heritage management including conservation, presentation and planning aspects has been involved in the heritage activities of historical sites in the recent years. As an example, management plans have been developed particularly for WHS such as Stonehenge and Hadrian´s Wall. Due to the environmental impacts of tourism, it is no longer sufficient to preserve solely archaeological material. Protected

areas must be planned for future-oriented conservation and development activities. Hence, planning issues should involve the archaeological sites with their surroundings which encompass not only site-based planning but also local land-use planning. Such a concept should introduce function to the conservation process. Current and future land-uses, ecological issues, traffic circulation and not least demographic and social composition in such areas become involved in the management plan. In this respect management is meant to deal appropriately with the aspects that are affecting archaeological resources directly or indirectly. Furthermore it aims to develop the heritage as a living space and not an obsolete location. Darvill (1987:1) summarizes:

> "Balancing the many, sometimes conflicting demands affecting the archaeological resource and developing a positive approach to its preservation and conservation, are known as archaeological resource management".

Approaching methodically, archaeological resource is composed of two essential aspects:

- Archaeological heritage as a whole physical setting (archaeological landscape),
- Components of related archaeological context as the archaeological, natural resources and intangible values (composing the archaeological landscape).

In order to engage planning into conservation, two approaches should be taken into consideration. The first approach deals with a holistic approach in defining the archaeological heritage as an entity. The second approach is concerned with the tools used in environmental reconstructions of past landscape:

- Organic approach (consisting of different parts that are all connected to each other),
- Classification of landscape modelling system (historical landscape approach).

The Cultural Tourism Committee of ICOMOS has set out detailed conventions of procedure in the conference of "Managing tourism at places of heritage significance". The first statement of the International Cultural Tourism Charter[24] point outs (Petzet & Ziesemer 2004: 140):

> "The natural and cultural heritage is a material and spiritual resource, providing a narrative of historical development. It has an important role in modern life and should be made physically, intellectually and/or emotively accessible to the general public. Programmes for the protection and conservation of the physical attributes, intangible aspects, contemporary cultural expressions and broad context, should facilitate an understanding and appreciation of the heritage significance by the host community and the visitor, in an equitable and affordable manner (article 1.1, 1.principle)."

Planning and implementation are parts of an integrated synthesis. The plan is the starting point of realization of the initiations. Therefore, such a recommendation about the activities regarding with the sustainability of cultural and natural heritage

[24] 8th Draft, for Adoption by ICOMOS at the 12th General Assembly, Mexico, October 1999.

should de established under the provision of a development plan, in which different situation specific aspects about the archaeological site should be undertaken.

From the same charter, 4th principle states that planning for tourism activities should provide appropriate facilities for the comfort, safety and well being of the visitor that enhance the enjoyment of the visit but do not adversely impact on the significant features or ecological characteristics (article 3.4., principle 3). In amplifying the last point, the attention should be paid into two ways; namely site facilities and the visitor's well being as well as protection of the resources. In this respect, archaeological sites accessible for the public requires thoroughly developed planning framework with clearly stated policies and objectives from the point of different user's view. Hence, designers are inclined to emphasize differences in visual detailing when individualizing places. Additionally, understanding archaeological site patterns can also influence the decisions about what kind of planning structure best suits their needs.

3.2 Spatial patterns of archaeological sites in rural landscapes

3.2.1 Archaeological site as artefact

In order to understand ancient cultures, it is necessary to look at the wider scene. In particular scientifically-valuable areas of archaeological significance often extend well beyond the site. The cultural landscape encompasses the whole components; many areas now appear to be natural, or sparsely settled, were cultivated in the past. Today's agricultural areas were occupied in the ancient times. Therefore, it is of essential importance to involve the landscape component in the integrated heritage protection.

The landscape and the environmental resources change slowly in a dynamic process, and so do its components. In fact, this raises continuing debates of cultural resources management regarding the new perspectives and understandings. Two major factors affecting this process are the changes in exploitation and form of land-use. The landscapes rich in cultural resources have become an integrated aspect of the countryside for recreation. The reason for that is the view of the nature of urban man which is mainly recreation-dominated, rather than culturally interested. The urbane view considers nature as a place for relaxation that is free from production but interesting and attractive as well. In this sense archaeology and recreation-leisure time is an inseparable team, the product is very much in favour and popular. The archaeological heritage contributes to our everyday lives and to the quality of life in general as well as the other recreation and cultural facilities.

The landscapes in the countryside are often mythical narrative. The main features of landscape including rocks, springs, mountains, rivers, lakes were assumed a sacred character in the ancient Hellenistic and Roman colonies. These futures have survived to the present day. Particularly, two common elements, the use of trees and the mountain peaks were associated with particular divinities and allowed the

population to come into contact with the supernatural (Bradley 2000: 28). Occasionally, the trees were near to the temple building. There are features of landscapes that have hardly changed over the centuries. Many of them still dominate the terrain where monuments make explicit reference to features in the wider landscape.

Landscape features such as rocks, mountains or vegetation also frame the built environment providing monumental backdrop. The local topography of these sites forms the image of the setting which has to be viewed in a particular perspective. It is the fact that the archaeological heritage, whether direct or indirect, often suffers the demolition more precisely at the edges of towns and countryside than in the cities. Heritage in the countryside, which is a composition of natural features and archaeological resources, is not simply a place with a particular spatial formation, but composed of a more complex perceptual structure. Meanwhile location and context, intensity of tourism, significance and values of the site are three factors shaping the situation of the sites, and they can define the main criteria to evaluate and exploit the area. While location is a stabile parameter, the other two options are changed temporarily by the circumstances differing in the society and landscape.

It is commonly accepted that the aim of conservation is neither to recreate nor to idealise the past, but to preserve present-day conditions and to establish design concepts by the help of contemporary planning principals. In fact, it is the scenery of the ruins with its landscape which makes it attractive and interesting for the visitors. Secondly, it is the history of the place and finally the scientific importance of the heritage. In this respect the physical appearance of the site has an essential role in terms of public interest. As a result, the silhouette of the landscape should be preserved whereas the existing topography should not be disrupted. In order to provide this, no act should be committed within the natural site preservation area that would impair the vegetation, the topography, or the visual affect.

3.2.2 Archaeological site as three-dimensional space

In planning spaces, one should distinguish the external space from internal space. Accordingly, the boundary line between inside and outside determines the character of the space. It might be a wall, a construction or a gate, even a hedge. Internal spaces are also distinguished with different norms and forms such as the size, terraces.

From the spatial formation point of view, it is likely to mention that spatial organization of heritage sites differs in dimensions and form. The spaces occupied by natural and archaeological structures are organic rather than geometric, and their shapes are irregular. The visual definitions can be intensified by differentiating interior from exterior spaces or by delineating rooms with a structure, though the use in certain areas of materials different from those found on the site, such as gravel (Sivan 1997: 54).

The architectural space can be defined as an area physically demarcated by three

boundary elements; a floor, a wall, and a ceiling. Although archaeological sites seem to have an infinitive space, they have partially internal and external spaces defining the quality of the space within the boundary.

In considering the architectonic space, two types of ordering systems can be identified; one is characterized by the horizontal and another by vertical structures of ruins within the landscape. The architectural structures are basically responsible for the quality of the space and are mostly considered responsible for the quality of the space. This may lead to dissonances between site and its structures. The lack of conception of defining space can cause problems dooming many heritage projects to a fate of minimal success. In the example of ancient city Sardis, such problems arise. Despite few numbers of freestanding remains the reconstructions make quite striking impressions on visitors. However, the reconstructed facade of the Marble Court (Sardis) (Figure 3.1) cuts off the whole landscape interrupting the relation between site and spatial continuity of the landscape. There is a formation of internal space which does not fit the external environment. On the other sites, there are also symbolic internal spaces. The boundary that plays the role of wall is invisible, and even if visible, it is inconspicuous and temporary. There is a sense of fluid at space.

Figure 3.1 Sardis “The Bath-Gymnasium complex; Marble Court”.

Owing to the significance and consistency of the natural and historical resources, archaeological sites consist to a high degree of visibility. The term “*visual envelope*” presented by Cleal & Allen (1995: 34) refers to the complex web of intervisibility which embrace the landscape within the remains, among the monuments and the surrounding landscape viewed from the monument. Accordingly the visibility is varied as “the view in” and “the view out” regarding the discernible difference of the monument among the others. Firstly, how the monument appears to the observers in the surrounding countryside, and secondly, how it is appeared within its historical and spatial context. In this respect, observer’s point of view should also be considered in defining the spatial formation of the site.

3.2.3 Archaeological site as scenery

A view is a powerful stimulus; it comforts and inspires. Views and panoramas contribute immeasurably to the character of the site where the viewer stands and, in turn, give those same characteristics to the viewer. In a similar manner, views represent all that the place represents. In these remarks, view of the site appears to define the space concerning with its natural and cultural resources. It is the integration of archaeological and environmental records for the area to provide an understanding of the monument within its natural and social landscapes. Hence, such an associated landscape should be explicitly defined.

Significant views enter the psyche of a place to be remembered long after other details are forgotten. In a way, views represent all that the place represents. The construction of permanent sheltering of Terrace Houses 2 (see Figure 6.11, p. 153) has brought a new approach to the discussion in the visual and historical integrity of ruins within its landscape. The dimension of landscape and aesthetical aspects at the sites has been always mentioned, but as a concrete and main theme with this specific example was arose (Schmidt 1993; De La Torre 1997; Özgönül 2001). It is the scale, texture, colour, form and the visual intrusiveness of the elements at the sites which has taken the attention of the archaeology world. The trend towards massive and costly interventions in direct response to the demand for interpretation of monuments to the public became a new phenomenon.

In the case of Ephesus, the protective shelter construction for the Terrace Slope Houses 2 dominates the archaeological landscape as it is immediately seen along the main street. It is certainly not the right scale integrated to the site character. In fact it could have been a good presentation; but the landscape of the site suffers from the inappropriate dimensions and texture of the building. Lack of interdisciplinary work seems to be the cause of this problem. The remarkable feature about Ephesus is that, ruins are to some extent readable and tangible, and they give the appearance of uniform vintage that is a major factor in the total impression of the integrity. While this feature lacks at Miletos, the access and traffic are main problems leading to reducing the optical as well as material quality at Hierapolis. The visitor access to the car parking area disturbs the scale of archaeological landscape endangering the visitor experience and the physical appearance of the cultural resources.

When the monuments are located in the immediate vicinity of a modern settlement, the visual quality of heritage site is directly affected by the modern constructions. Didyma Sanctuary is a case in point. The wider landscape, in this case, encompasses the improper built environment and the modern road. In contrast, the remains of the ancient roman temple Red Hall in Bergama is well suited to its contemporary built environment.

The significant feature of the view within the remains is seen as a far horizon from the site leading to the wider landscape. The far horizon is the most obvious feature of the landscape, constituting, for most of the view, the line marking the division between land and sky. For most of its length it forms a continuous line, distinct from the near horizon and foreground, and only rarely lying in front of an even more

distant glimpse of higher ground (Cleal *et al.* 1995: 37). They appeal to the romance, intimacy, mystery and surprise owing to the hidden information. Hence, deliberate research and sensitive design measures should be required in laying out conservation concept to prevent the extinction of its context utterly. The full effect of the site can be captured only from a higher point otherwise, in some cases; the view is meaningless and aesthetically unappealing. In many cases, the top of the row of an amphitheatre is a perfect place to grasp the entire landscape. They provide an overlook to the site which also helps establish the connection between the site and its surrounding landscape. An overlook allows the eye to grasp the entire territory swiftly and accurately, it helps establish familiarity between the viewer and the landscape (Ashihara 1983: 98).

From an isolated setting to a cultural heritage landscape: Stonehenge (WHS) as an example for an archaeological heritage site management

The activities carried out on heritage monuments, particularly at archaeological sites tend to develop a holistic approach based on structural, functional as well as visual dependences. This is of essential importance on sites where the cultural material is perfectly integrated into the landscape. Stonehenge is a case in point (Figure 3.2). Stonehenge was inscribed on the World Heritage List in 1986 for its outstanding prehistoric monuments. At Stonehenge, the unparalleled stone circle, dating back to 3000 B.C.-1600 B.C., is surrounded by a ceremonial landscape comprising more than 300 burial mounds and many other prehistoric remains. Altogether, the Stonehenge WHS covers 2.600 hectares owned by English Heritage, the National Trust, the Ministry of Defence, farmers and householders (English Heritage). Its popularity as a place to visit the megalithic monuments, currently nearly 800,000 visitors a year, has impacted the quality of remains and its landscape leading to a cheap mass and lack of respect for it (Chippindale *et al.* 1990; Cleal *et al.* 1995). Particularly, two main roads surrounding the site seems to be intrusive for the heritage which leads to a sharp contrast between old and new, but despite of the visual disturbance, noise and pollution has diminished the visual and structural qualities of heritage site (Cleal *et al.* 1995: 23).

The main objective of the heritage project is to return Stonehenge to rural place in its landscape and surrounding (Chippindale *et al.* 1990). In the case of Stonehenge, a visitor centre is proposed to be planned which should be sited 1 km away from the centre to increase the average visitor stay at Stonehenge from 20 minutes to 2 hours (Rowe 2001). As a consequence, the mass pressure on the monuments could be relieved by expanding the visited area providing new visitor facilities. In order to accomplish these objectives, a planned solution was developed consisting of three main aspects:

- To make open space around monuments, so that the related landscape can be also perceived,
- To provide facilities at a better distance,

- To let visitor approach monument on foot.

The main objectives regarding the land use changes according to the Stonehenge Land Use Management Plan (2001) (Rowe 2001) can be summarized as the following:

- Removal of the visual impact and noise of roads and traffic from the vicinity of Stonehenge: The road passing through the heritage site will be placed into a tunnel to reunite Stonehenge with its surrounding and grass setting.

- Partial closure and removal of existing visitor facilities: A new visitor centre outside the World Heritage Site will be built providing extra visitor transportation.

- The grassland will be extended to enhance the setting of the monument, conserve archaeology, improve accessibility to the wider landscape and enhance nature conservation.

In this respect, an establishment of new facilities are developed in terms of presentation terms and which discusses which priorities of the site should be emphasized more than the others. Owing to the site constraints, the tourist facilities are intended to be drawn to the landscape-specific aspects. Research has also focused on the growing visual assets at sites (Cleal *et al.* 1995; Exon *et al.* 2000) where researchers' archaeological evidence with landscape features combine.

Exon *et al.* (2000) explored the spatial relationship between monuments at Stonehenge and the adjacent ones existed in its surrounding to ascertain the positioning of the monuments. They have assumed that the placement points of the monuments were based on a specific spatial order, likely a geometrical arrangement. According to this phenomenon, a belief system bearing on landscape specific attributes had been developed and so the monuments could have been set on the landscape. Patterning is conditioned by past and contemporary action and interpretation of such arrangements is conditioned and reflexive**.** Nevertheless the study defines the site from a landscape archaeological approach; it reveals also hints and information about structural, functional and visual features which is of importance in establishing the conservation, management and presentation of the monuments. Likely, the term "*visual envelop*" (Cleal *et al.* 1995: 34-40) refers to a complex web of visibility which enclose the area of site within its landscape, among the monuments and the view from the surroundings to the monuments.

The enclosure patterns within the site are to be recognized as physical continuity indicators:

- Foreground,
- Near horizon,
- Far horizon,
- Distant horizon.

Figure 3.2 Stonehenge circle “The Stones” (Exon *et al.* 2000: 69).

Figure 3.3 Stonehenge from Bush Barrow (Exon *et al.* 2000: 89).

The far horizon is the most obvious feature of the landscape. As a consequence, the definition of the former visible features of heritage site and its landscape should show some hints if the site was purposely chosen, as well as information about contemporary demands and needs for presentation aims.

The land around Stonehenge is relatively subtle with few topographic constraints (Figure 3.2 and Figure 3.3). The openness of the landscape is dominated by the Stones. The landscape does not dictate the positioning of monuments in such a dramatic manner. The barrows seem to have formed a major component of the larger, structured landscape. Therefore the spatial relationship between the monuments could be conceptualized to form an enclosed ritual space (Exon *et al.* 2000: 2). For this aim, the National Trust opened “*archaeological walks*” about its Stonehenge estate, a network of footpaths enabling – indeed encouraging – walkers to visit the burial mounds an the other archaeological features in the Stonehenge landscape (Chippindale *et al.* 1990: 164).

3.3 Heritage

3.3.1 Heritage as a concept

In the sense, the preserved and presented ancient built environments within their landscapes appear as heritage. But in fact, the term heritage covers beyond the scope of conservation. In German language; the word “Denkmalpflege” encompasses a broader concept than the term “Heritage”. The term “Pflege” involves both protection and maintenance. Therefore it refers to the stages from excavations to the assurance of sustainability of heritage’s existence. Additionally, it touches on the terms; conservation, preservation, maintenance and amenity service. In this sense the heritage can be regarded as a product, served for various purposes. Ultimately, heritage preservation is a means of bounding the social, economical, environmental issues with natural, historical and cultural components. To reveal and ascertain this connection, cultural resources require interpretation means in terms of archaeology, history, architecture and recreational facilities.

The definition of the word “Heritage” in The Oxford American Dictionary (McKean 2003: 670) is given as a simple concept; it states that heritage is anything that is or may be inherited. More explicit; it is defined as a nation’s, state’s etc., historic buildings, monuments, countryside, etc. when regarded as worthy of preservation. In cultural resource management and archaeological studies, heritage gains a broader concept including the natural as well as the cultural environment. It encompasses landscapes, historic places, sites and built environments, as well as biodiversity, past and continuing cultural practices, knowledge and living experiences. Furthermore, heritage receives the meaning of consumption and exploitation of historical resources. Heritage places include historic buildings and monuments which bear the distinctive imprint of human history. Heritage places, in this sense, are linked with people, events, and activities and, in a wider sense, with cultures, societies and economics (Herbert 1995: 5).

Cultural heritage is the end process of this selection of cultural items (see Table 2.1, p. 18) which eventually represents archaeological and cultural significances. It may be also agreed that cultural resources can exist everywhere but heritage does not. Nevertheless heritage can be produced in terms of tourism facilities and it can be even constructed. In this sense, archaeological sites as heritage sites can be regarded as being re-established by archaeology practitioners through excavations and conservation measures. Moreover, goals and objectives are clearly identified defining the benefits which relates with conservation concept rather than amenity.

In addition, the natural environment and the landscape are also considered as the part of the heritage which should be preserved. As tourism has gained a strong relationship with heritage, the landscape has been more and more included into heritage attractions thoroughly by heritage management. The cultural traditions and the social developments are also included in heritage.

As a consequence, heritage places can range from theme parks, ecomuseums to seaside resorts. However, the archaeological sites combine the relationship between cultural material and natural resources.

3.3.2 Heritage conservation

The concept of heritage has widened its scope since the natural and cultural resources are considered as integrated aspects of cultural environments. Contrary to conservation, preservation has a purist view regarding the historical background; it seeks to keep the cultural material in its original state. As in Chapter 2 mentioned, the cultural landscape evolved in the course of time is still working organism and give the hints of past cultures.[25] Hence, they represent an accurate record of what has remained in that place. The general term "heritage conservation" actually involves a broader concept. A brief description of three heritage measurements can be given as the following (Aplin 2002: 69-73):

- Preservation:

Preservation aims to maintain the archaeological fabric in its existing state and retarding deterioration as well as to slow or even halt processes of deterioration.

It involves more comprehensive work and programs directed not only maintaining the fabric, but also actively mitigating damage to it.

- Conservation:

Conservation comprises all the processes of looking after involving preservation, restoration, reconstruction, adaptation, and maintenance. It is the overall process of caring for the natural and cultural significance of a place. After or during the conservation measures, maintenance activities take place involving the continuous protective care of the fabric, contents and the setting of the place.

- Reconstructions: Reconstructions involve complete or partially rebuilding of a heritage item on the basis of firm evidence of its previous state. In this respect, at archaeological sites it is regarded as a means of intervention which should be kept to a minimum.

The complex character of the cultural landscapes and their evolution which were discussed in Chapter 2 represent both aesthetically and historically significant values which the heritage conservation directly determines what sort of policy should be implemented. The use and development of the heritage can lead to exploitation. Larkham (1995: 86) assumes that exploitation poses more practical and conceptual problem for conservation. In a broader sense, exploitation also recognizes the values of archaeological landscape, yet the manner in which this is achieved varies from

[25] Trimborn (1997: 56): „ Dass die Stadt der Gegenwart ein lebendiger Organismus bleiben soll und muss, in den das Alte gleichberechtigt neben den Neuen steht und in dem somit tatsächliche Entwicklungslinien uns Weiterentwicklungen im öffentlichen Raum eindeutig ablesbar erhalten werden."

different planning principles and design issues. In this sense, interpretation involves all three measures (preservation, conservation and reconstruction) and it is the transformation means of tangible and intangible values at heritage sites using all three aspects to visitors. As a consequence, a site planning should encompass all these three aspects of heritage management.

Heritage preservation is a constant endeavour. It requires continuity and elaborate planning. As a common approach, heritage preservation is focused on the reconstruction and restoration of the object. As a result an ancient structure without content within the relating view or landscape is recreated. In the process many historic places become sanitized to the point where they are robbed of their personality, intrigue and meaning (Paterson & Colby 1989: 41). The selection of the appropriate preservation efforts demands a clear understanding of the history, values, attitudes and ideas being expressed. Heritage conservation is closely related with the socially attributed values on the assigned spaces. The evolution of cultural landscapes continues in the form of conservation. Once the remains of past were used as source for the quarry, now they are valued for their cultural and historical qualities as evidence of the past.

In heritage conservation the traditional viewpoint of object preservation has led to the "*museumification*" of the heritage that separates the cultural material from the landscape. Overly careful reconstructions of heritage places reduce the effectiveness of the experience which creates sterilized places. To avoid this attitude, in the first instance, it may help to think of the site as being first and foremost an important source of ideas, imagination and impression for shaping the landscape around. Through interpretation, the story of the place will be reflected on the physical components of the resources. The selection process of the cultural resources determines the period and presentation of heritage creating the heritage product. Heritage conservation, to a degree, generates the cultural products. Consequently, it can be stated that all preservation is intervention which to a degree affects the authenticity of the object (Ashworth & Tunbridge 2000: 13). The perceived experience is conveyed through thematic interpretation of the heritage within its landscape. This process can vary from preserving the historical resources in its own context to creating a new one. Accordingly, the landscape values can be regarded as the complementary options for the interpretation as well as the preserving of the resources. The characteristics intrinsic both to the site and its landscape should be deliberately defined and expressed by means of physical and spatial site planning.

Heritage preservation provides a positive and tangible impact on the living environment of local people. It helps providing effective use of public spaces and most important job creation and empowerment of community. The benefits of it can raise the quality of the environment. There is a growing acceptance that sustainable development based on heritage attractions can make a positive contribution to a broader environmental strategy (Stevens 1995: 195). Bergama epitomises the characteristics of an integrated cultural park involving different periods of past cultures. The contemporary settlement existing between Acropolis and the late-

Byzantine city has not profited from the tourist flow to the ancient city so far. In this old historic city core settlement, the housing, services and community facilities are in need of improvement. An improved transit access to visitors through the old city core combines the historical-cultural site with the contemporary environments which enable the site to integrate the comprehensive urban development with the preservation of historical sites and monuments.

3.4 Role of design in heritage conservation

Throughout the concept of heritage conservation, the term “design” has appeared frequently as a problematic including theory-induced method within the academic community of historical environments leading to frequent discussions. On one hand it was considered as a consensus for authenticity and interpretations enhancing the values and qualities, on the other hand it was argued that design as a present-day impact as well as tourism facility should not belong to the historical environments leading to lessen the cultural resource values. The answers for the questions of what extent should we integrate design into heritage conservation and what should be redesigned or avoided varies according to the debates of various disciplines and regarded stakeholders.

Design proposals tend to enlarge the scope indicating the spatial and landscape values of the physical remains which provide a prospect for the heritage. At archaeological sites the objects have been partially sited, or at least the foundations of the ancient buildings have been accentuated. In this respect, the setting had been developed and re-formed in such a specific place for particular purposes. In this specific place certain populations (here visitors and tourists) will behave in particular manners and expectations which should be predictable by designer, even if problems arise when they conflict with reality. Rutledge (1981: 5) maintains that when designers bungle or ignore planning for behaviour, responsibility must be ascribed not only users but to designers as well.

The design emphasizes among other things the significance of the space enforcing the visitor to form his own images. Authenticity in terms of heritage conservation has altered its concept through the changing attitudes towards social, cultural and aesthetical values. Today, it is an important attribute in heritage tourism and the role of perceived authenticity as a measure of product quality is not only essential in tourism research, but also in heritage conservation and management. Perceived authenticity is what the visitor (hereafter, tourist) gains through his experience, motivation and interpretation (Chhabra *et al.* 2003: 703-704). This phenomenon can be observed at the archaeological sites in which numerous reconstructions and restorations have already existed or are carried out.

Regardless of the debates in conservation issues, the role of design in maintaining heritage attractions including the reconstructions and archaeological parks are well-known in terms of visitor facilities including information, recreation, and heritage conservation. Certainly, comprehensive strategies for heritage design

approaches are prerequisite, in particular when the aspects of leisure and tourism tend to dominate at historical environments. Particularly, the aspect of conservation in terms of controlled visitor facilities and organized tours at sites are closely related with the design strategies of the sites.

In present day, the preservation of original substance and maintaining its authenticity are of importance. As a design option, reconstructions, in turn, have become an essential method in presentation undertakings in many archaeological parks and sites. Depending on the point of reference and experience of the experts involved, reconstructions are sometimes synonymous and functionally overlap with restorations and similar preservation/replication efforts (Jameson 2004: 2). To meet the tolerable standards of contemporary design and insurance of authenticity, the balance of various factors should be interwoven in the visual and perceived qualities. The genius loci, character of the site, require thoroughly investigation as well as interpretation of site features. Since each archaeological site requires a dissimilar method and system of implementation facing with different problems during and after the field work, a variety of appropriate structural and functional methodologies are to be needed. Fowler (1997: 55-69) mentions the importance of exploration and assessment of whole system in different dimensions. For him; in order to understand, conserve and demonstrate how they evolved, we need to look at the system which they were a part, at its workings which produced what we now see, and not just at the bits of land where monuments survive and buildings sag in ruination.

3.4.1 Authenticity and design

Archaeological sites, parks and museums strive to present themselves or the items they contain or seek as the authentic, “the real thing” (Macinnes & Wickham-Jones 1992; Handler & Gable 1996; McManamon & Hatton 2000).

Reconstructions seek to make concrete more abstract elements of culture. Their purpose is to conserve an aspect of cultural heritage in a representative collection. Reconstructions have been used as a particularly common strategy in the presentation of archaeological sites to tourists. Contrary to the theme-parks, archaeological reconstructions have a foundation on which they can base. However, it still presents a fictional scenario which could have taken place here.

The present form of the site constitutes the scenery of monuments afterlife which has been formed during the excavations and evaluation of information. The final appearance of the remains depends on the interpretations of the responsible team of researchers. Ancient city of Knossos, partially reconstructed by Arthur Evans (1851-1941), is a case in point (Schmidt 2000: 23). The ancient remains display a fiction of his personal interpretation by means of a massive manipulation. Reconstructions which do not relate to the archaeological and natural environment convey often a wrong impression about the physical setting due to the lack of developing a concept-planning in terms of a holistic approach. According to Aplin (2002: 73) one reason for that can be that reconstruction is still firmly within the bounds of heritage

practitioners, not theme-park builders. These remarks can be expanded in which the reconstruction should be considered as the whole archaeological activities particularly conservation measures without designers as theme-park builders. In the extreme case of archaeological parks which can be considered as theme-parks, there are other values given priorities for determining the conservation objectives.

Tuchelt (1994: 2) critically addresses that after excavations, the intentions concerning protection and preservation of heritage tend to reconstruct part of the ruins that leads to the creation of souvenir value of ancient heritage. At the same time, he admits that only one aspect, namely the presentation of ruins has become the focus of public attention after the excavations. Authenticity is an important concern in present-day heritage conservation concept, yet it is not a prerequisite to attract visitor's attention and to increase the popularity of the place. Hence, the originality is a concept more than a tangible quality for most of the visitors. In fact, each invention on the historical material strengthens its heritage value. Consequently, this provides access to public, as well as readability and tangible meaning to the ruins which makes ruins the focus of public attention. However, today's conservations measures require strict obligations. Conserving the remains in their latest state by means of a minimum degree of interventions or additions or manipulations in the structures may lead to alterations not only in its appearance, but also in the construction quality. If it is necessary, like in many cases, to protect the structure a protective layer is built which is distinguishable from the original structure and material. Materials which are completely alien to the character of the remains in terms of design, history and architecture are absolutely neglected. Above all, climatic conditions, like sunlight, wind, rainfall, extremes of temperature changes, distort also the physical quality and appearance of the remains. Protective shelters or houses are the temporary constructions to intercept the negative effects of dynamic factors. The integration of these structures within the landscape and the site has been briefly discussed and outlined by Schmidt (1988, 1993 and 2000) in his numerous works.

Another reconstruction type is to re-establish an abstract history by means of tourist experience. It is recognized that heritage interpretations at modern sites are main attractions for tourists. Light (1995) discusses the educational and inspirational value of interpretations and their informal didactical role in conveying the idea of past and perceiving the archaeological environment. Walsh-Heron and Stevens (1990) comment on interpretations as a motivator of a heritage. The Viking Street in the Yorvik Centre in York is a point in case. The museum was established to create a tourist centre in its original historic area which had not existed anymore. It serves tourists a historical recreation with learning process by means of experience rather than having scientific values (Schmidt 2000: 45). Reconstruction's popularity rests on its ability to project, through an appropriate setting, something of past life styles (Newby 1994: 213). Prentice`s (1993: 36) comments on York Centre as a "time tunnel" ride, claim a sort of fun action rather than a historically important place activity. In contrary, the realisation of Viking life has been defined by Addyman & Gaynor (1984: 9-10) as three dimensional archaeological interpretation which should

also refer to the three senses stimulated, namely sight, sound and smell (Jordanova 1989: 25). Nevertheless Jordanova (1989: 26) criticizes such interpretations as they devalue the historical scholarship. She adds that what visitors see is highly selective for the reason that only those aspects that are easy to visualize is present.

Pehnt, cited by Trimborn (1998: 58), assumes that such productions convey mistaken ideas and beliefs about the historical reality through staged historical settings and consciously generated fictional sceneries. He comments that the production of history will suppress the reality, as long as fiction dominates the heritage presentation leading to obsolescence in the witness of history. He states that nothing can testify public's ideas how the history could have been.[26]

The idea that historical interpretations lead to heterogeneity in the heritage conflicts with the educational and leisure objectives of heritage. According to Herbert (1995: 9), it is a sense of nostalgia rather than the need to understand, which makes heritage attractive. In case of archaeological sites, this process is gained through presentation of physical remains in terms of their contemporary situation and appearance. Tunbridge & Ashworth (1996: 8) call it as selected resources which are converted into products through interpretation. Insofar the reconstructions dominate the site within its landscape in which the exploitation continues. Yet, present-day presentations, in some extend, are preferred to emphasize the intangible values and feelings through landscaping of the site, rather than reconstructing the physically remained structures. In this respect, it tends to impair the impact of exploitation of the structures, as well as to recognize and imply the associations of remaining ruins reflecting on the landscape, creating the sense of setting.

To a certain extent, the visual aspect of the site can help to meet the needs of demands and expectations of visitors. The constructions established to display supposedly copies of ancient examples like Paul Getty Museum in Malibu has also the function of keeping the artefacts, receives in a high degree of interest even if it is scientifically not correct (Schmidt 2000: 28). But above all, preserving the historical structure in its context requires its initial setting, whether the heritage bases on the physical remains of evidence or not, the setting makes the authenticity and aesthetical appearance. The difference lies on the values they possess, the productions of history tend to have commercial values which are relative to time, while cultural values draw on a richer and deeper heritage. Newby (1994: 216) states that commercial values last as long as the profit element. He adds that commercial values distort culture through selection, interpretation and bias. What is chosen from the past is what is expected to be profitable.

Another point of view is the importance of the environment and landscape of the heritage, in which the selectivity of environs of reconstructions should contribute to the heritage preservation (Trimbold 1998). He assumes that the open space is the

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[26] Pehnt (Trimborn 1998: 58): "Die nichts bezeugen als unsere Vorstellung davon, wie Geschichte allenfalls gewesen sein könnte" (see „Die Erfindung der Geschichte" by Wolfgang Pehnt, München 1989).

setting of the re-animated history, quasi the stage of the production, thus the relating landscape surrounding the heritage should be as apparent as possible displayed to visitors grasping the entire context. This has important implications for both the conservation and preservation of attractions, not least in how far planning and design of a site can be intended and which principles should be carried out.

In fact, there is a growing body of evidence, that such patterns of heritage as tourism attractions can meet the needs and interests of people who seek not only to conceive tangible and intangible values, but also just to see it effortless. In this respect, this is an important feature for it emphasizes a customer element to the definition of attraction. Participation, as being part of a heritage attraction, has been defined by Prentice (1993: 11) as “to be able to come into contact with and to perceive heritage values”. Insofar different patterns of attraction attributes supply multi-forms of participation creating differentiations in perception. The example of monuments and sites associating with death serves to remind this phenomenon. Here another form of sensuous perception is emerged from the existing values and personal experiences before and during the visitation.

Imaginative reconstructions have the advantage to use the leisure and amenity aspects using the physical form and shape of the historical event, as they are created according to the demands of interest. Whereas archaeological sites as historical attractions, must be tackled in terms of preservation and conservation measures which is concerned with structural and intangible values, and than should be opened to the public in a restricted way. The best alternative is to have a function whose values are sympathetic to the form. So, as the form and the structure of a heritage are not desired to be changed in order to serve a particular function, then a function should be integrated into the heritage. In archaeological sites, visitation is commonly the main recreational function without exploiting the physical remains much.

3.5 Contemporary functions and uses in historical environments

The usage of heritage after the conservation and preservation measures is one of the issues frequently leading to debates; another issue discusses the harmony of built structures to its landscape and surroundings at the heritage site in terms of architectural and aesthetical aspects. However, in the recent years, the exploitation of heritage sites recognize the need of design principles, as the recreational demands have growing requirements both in spatial continuity of presentation and the visitor facilities. Particularly, at archaeological sites, the decisive point leading to a necessity of planning and design can also be indicated to the contemporary usage of sites which have already been explored and excavated since decades rising adaptation problems to the old environment owing to the interventions which has changed the landscape as well as adjacent townscape.

To a large extent, the supply of heritage sites has been completed through initial scientific work and a new era has already taken place on the sites due to intensive visitor access. Hence, the range of activities at sites has been widened from mono-

option use to multi-uses which occur at sites surrounding in situ monuments. Larkham (1995: 88) states that understanding of these actual changes requires consideration of decision makers involved. As a result, the sites require new aspects regarding integrated conservation and planning options that aim to achieve all three aspects of heritage preservation, conservation and presentation. In this sense, the greatest challenge faced by the designer is the interface with the professionals whose interest is focused on the protection of resource and for whom public access is an aberration (Stevens 1995: 197). Public access brings a new aspect of behavioural manifestation which should be dealt with in physical design. Knowledge about human behaviour resides in the behavioural sciences. Ideally, then, the designers may be seen as consumers of the scientists´ efforts, the latter, in turn, responding to designers´ calls for intention needed in the course of their work (Rutledge 1981: 5).

Archaeological sites represent wider scope of values. It is recognized that they consist of important resources by means of scholarly studies, cultural and natural conservation and amenity factors, including tourism. Since decisions taken regarding the different uses of a site affect its values, a systematic and comprehensive approach should be adapted in the process of usage and planning of resources. The need to balance the interests at sites is of essential importance. In the recent years large-scale usage such as public visitation and smaller-scale usage like information access have been becoming important aspects of defining heritage site presentation and management.

Heritage management has enabled heritage uses to resort a compromise by means of structural, functional and visual aspects at the sites. The accessibility to the heritage sites leads to the patterns of specific tourist behaviour relating with the perception of heritage. Behavioural patterns are of importance in defining structural and spatial formation of the site as they are undeniably based on the demands and needs of visitors. Design helps to associate the tangible and intangible values derived from components of natural and cultural resources with the personal experiences, interests by arousing their perception in a specific aspect. It enhances spatial and visual qualities, as the sensuous quality of a place is a consequence of a form (Lynch 1971: 189). Furthermore it enables the aesthetic structures to reveal in the landscape. So, a site should be technically gut organized, but perceptually coherent as well. Thus, it should attend to arrange a simple, readable and well-proportioned site in order to simplify the perception and grasp the entire connection by using every kind of resource. When such a readable space is established, it has a strong emotional impact on the observer.

The working sites such as historical gardens as well as conserved landscapes and ecologies cease its normal functions due to the similar contemporary usage and context in spite of their vanishing original form and structure. Archaeological sites and historic landscapes, quite different from historical gardens which are continually used, represent non-renewable resources which have lost its function and original character. A distinction between archaeological features as the surviving structures

and historical features as the extinct usage may be reasonable in order to identify the range of usage options. In this respect the current existence of archaeological sites challenge with various aspects including their contemporary treatment in terms of usage.

3.5.1 General usages of heritage

The use of a cultural site evolves in the course of a time. Present-day understanding of historical places, including archaeological sites has been changed through precise and deliberate functions, based on the sustainability of resources. Current state of archaeological heritage requires more sophisticated and complex accomplishments in terms of cultural resources management and site usage. Modern use of ancient sites raises an important question: Is there any appropriate use of ancient monuments? Is it possible to define universal criteria? An important attribute of heritage usage is tourism, which has reflected its power on the archaeological sites in the recent years. Furthermore, the heritage management concept involved to heritage studies offers to establish universal criteria for their usage.

Table 3.1 The usages of heritage.

<table>
<tr><th colspan="7">Usage of heritage</th></tr>
<tr><td rowspan="2">Directly
Particular experience</td><td colspan="3">Scientific</td><td colspan="3">Recreational</td></tr>
<tr><td>Archaeological</td><td>Didactical</td><td>Historical</td><td>Leisure</td><td>Economical</td><td>Tourism</td></tr>
<tr><td>Indirectly
Intangible idea</td><td colspan="3">Interpretations about history
Mythology
Associated scientific researches</td><td colspan="3">Social values, place identity
Beliefs, religion, pilgrimage
Traditions</td></tr>
</table>

Theoretically, the uses of heritage, summarized in Table 3.1, occur in two ways:

- Use of structural values (directly): Heritage is used to serve for the tourist services in terms of education, leisure, accommodation, social facilities. It also consists of intangible values.

- Use of historical value (indirectly): Cultural resource is used to serve for the scientific studies because of their archaeological value and afterwards as a presentation object to display the findings to the public. Additionally, they are appreciated with their religious, social and traditional values. Pilgrimage (purposely or by chance) is one of the essential usages of historical places and heritage sites across the world.

Both of the uses are based upon the sustainability factor of the resources whether they are modified due to the interventions or kept in their existing state. The idea of living and feeling the past is the common objective becoming intertwined in practise.

Tunbridge & Ashworth (1996: 11) state that this occurs in part through the organizational structure of heritage production; the materials being used, such as

museums, monumental buildings, historic landscapes and the like, are in the custodial charge of individuals and institutions with a resource- based definition of their task, while the producers of heritage use a demand-based definition.

In a broader sense, archaeological site usage compromises two main options:

- Scientific use (Academic approach): It is informative and research-based. Scientific use is focused on the cultural resources regarding their archaeological and historical values. As the resource is non-renewable and fragile, this use needs options regarding conservation and sustainability of the resources. Thus, it is the primary aim at archaeological sites. The aim is education-orientated, particularly for the related scholars and secondary for the public interest as a didactic usage. It is a self-absorbed view in protection (Shepherd 1992: 166). Scientific activities aim long term use of available sources to gain information; therefore they can be continuously carried out during the excavations as well as after the site has been opened to the public. Landscape archaeology of the site is also one of the related themes including to the scientific researches.

- Recreational use (Aesthetic approach): It is based on exploitation and displaying of the cultural and natural resources for the public; it reflects the representative part of archaeological sites, based on the adaptation of archaeological and natural resources as well as symbolic and social factors to the present-day demands needs. It attempts to point out the importance und necessity of heritage conservation. Consequently, the activities make a contribution towards keeping the heritage in awareness and in connection with the present-day notions. Furthermore, it consists of the leisure factor, to some extent, which makes the archaeological sites popular and interesting. Leisure consists of number of occupations in which the individual may indulge of his own freewill-either to rest, to amuse himself and improve his skills.

Recreational use enables site planning to extend its options additional to the scientific usages. Consequently, the options can be extended and varied in scale and mass.

Recreational use has been developed by tourism, in which the cultural and natural resources have been an important focal point for tourists. Through development of tourism industry in recent years, planning activities has been drawn to visitor-oriented approach. It is of essential importance to prevent the impacts of tourism on the resources owing to the mass exploitation. This option requires a proposal for the landscaping of open areas acting on the principle of maintaining the original topography and the existing flora and land silhouettes. In Athens, the archaeological zones as “green belts” are integrated into the urban structure regarding the recreational option of heritage usage.

In terms of recreational use, the activities carried out vary according to the type of the sites and heritage resources. Recreational use aims to introduce the cultural and scientific qualities at sites as well as the amenity factor of the heritage site. Recreational uses can take many forms and ideas. Digance (2003) discusses in his paper the usage of heritage sites from the perspective of pilgrimage. Packaged

religious tours serve for the tourists to live an individual spiritual experience within their holiday vacation.

3.5.2 Multifunctional usage

In many cases, the uses overlap considerably and form in a broader perspective multi-usages in its contribution to place in terms of protection, amenity and image-identity. Multifunctional use is frequently likely preferred by the planning options at sites. Archaeological parks have more than one function, as the conservation options are not as strict as the archaeological sites under protection. It is desirable to synthesise these disparate approaches (academic and aesthetic) into one coherent system in archaeological site usage. In doing so, both qualities of use can be applied in optimum management of resources without raising problems.

Compatible use is a term defined in the heritage conservation. It involves no change to the culturally significant fabric, changes which are substantially reversible, or changes which requires minimal impact (Aplin 2002: 73). It ultimately depends on a complex combination of factors, not the least of which is the nature and strength of the heritage significance of the site.

It should be the act of using the resources under optimum conditions. The development should be supported under controlled management and planning activities as the uses of a cultural site may evolve in the course of time. The content of the activities whose scope should be outlined is determined by evaluating the site.

3.5.3 Distinctions in the functions of historical sites

Alternatively, Ashworth & Tunbridge (1990, 2000) differentiate archaeological sites in the modern city from archaeological sites in the countryside according to their tourist usage. They categorize historical places as “monofunctional” and “multifunctional“ centres with historic resources relating to the diversity of historical and tourist facilities. Multifunctional regional centres with historical sites are well integrated with the other functions in the urban space. The urban physical setting enables the site usage and user profile to extend the tourism activities in the city. Tourists in urban centre have more facilities than in countryside and they can combine the historical place visitation with other forms of tourist activities.

In tourist regions, dependent upon quite different tourist resources, historic resources generally perform an ancillary function. The usages of these sites depend on the excursions included in resort packages or private day trips. Thus, for example, excursions to Pergamon-Ephesus-Hierapolis-Aphrodisias-Miletos-Priene are included at the Aegean Resorts between Bodrum and Kuşadası; Pergamon-Assos-Troy serve the northern Aegean and Dardanelles resorts such as Çanakkale, Perge and Side the Mediterranean region resorts. At the same time, there are some coastal villages rich in historical cultural resources, particularly ancient city remains, which have extremely expanded in recent years due to the demand based tourist development

relating with the historic and natural values, and physical setting. The role of the historical resources in the development of tourist resorts has grown increasingly in recent years. The archaeological site of Side is a case in point. Due to the rapid development of tourism, the town of Side (south of Turkey) has been enlarged and the ancient city remains locates within the contemporary town in the mean time. The scattered ancient remains from the ancient city Halikarnassos can be seen in the contemporary demand-based tourist centre Bodrum. The small coastal village Kaş (Antiphellos) is rich in archaeological remains as well. Antalya can be regarded as an example for multi-functional regional centre with historical resources.

In this sphere, the historical places, particularly archaeological sites displayed at countryside possess mostly resource-based monofunctional historic city significance as the facilities are restricted rather than in the urban scheme like in Athens, Rome or in İstanbul where the display of monuments and sites are a quality of townscape. Differences in physical relief determine the tourist-historical development in archaeological sites and they expand heritage resources.

The Acropolis of the ancient city and the Red Hall in the old town of Bergama are exceptional examples for a multi-functional historical place in a modern small-sized city Bergama, but despite of the convenient situation, the integration of the archaeological resources has not completed yet. Due to the lack of a development concept in terms of historical spaces and archaeological site management plan, such an initiative has still not been brought into stage, which could serve as an accomplishment of a successful site management plan.

An adequate diversity of sensations and environments should be available: This is a prerequisite for giving the inhabitant a choice of the environment he prefers at any time, and corresponds to a widely felt pleasure in variety and change (Lynch 1971: 225). The latter example of Bergama constitutes this diversity of environment, in which visually different forms has been created through different epochs in a spatial continuity.

Historical resources and their facility factors as well as the activity area of physical setting are directly related to the land-use development. This is most significant to physical planners and practitioners who should provide the park user with a quality experience but it is also important to the visitor who must use the park resources and facility to. It is an act between the activity through the physical resources (site characteristics, non-renewable resources and site qualities) and the participants. The focus of attention must shift from the object to the user and especially the relationship of the modern user to the conserved past.

Summary

The discussion of this chapter has centered firstly on the nature of the archaeological sites. Secondly, heritage phenomenon as well as heritage conservation, planning and design approaches were discussed. The contemporary functions and the uses in heritage sites were thoroughly defined and classified.

Current appearance of archaeological sites and landscapes has evolved from the recent activities of archaeology on the settlements of past cultures. The preserved and displayed archaeological artefacts as heritage are the results of scientifically and demand-based selections. The ultimate goal is to preserve the site for public and professional education as well as its appreciation. Yet, it can not be denied that the popularity of archaeological sites as recreational facilities enhance the values and uses of historical heritage and landscape. These areas tend to set aside for public recreational use.

Recreation within the archaeological site can be offered, only if the conservation of the heritage is ensured. By means of appropriate and strength conservation, the individual artefact is sustained. In additional to this, it is of importance to ensure the spatial continuity of the heritage and its integration within the surrounding landscape and environs. As a result, to be fully appreciated today, it must be in a setting similar to its original setting.

The unresolved paradox between conservation and recreation at heritage sites are based upon the scientific value considered as authenticity. In present day, the preservation of original substance and maintaining its authenticity are of importance. This can be achieved in different ways. However, the tendency for criticizing the activities at heritage sites is still in existence. Almost all interventions are assumed to be threat for these values. They are considered as museumfication or disneyfication which leads to the distortion of archaeological authenticity. The fact is that many people seek a more informal understanding and appreciation of what they see. Moreover, it is arguable to talk about what is authentic at archaeological sites. Besides scientific works, presentations using partly reconstructions provide leisure aspects through historical physical form of artefacts and the story within the archaeological landscape. In the light of today's heritage approach, the goal should be to provide the balance between the genius loci and the presentation, and interpretation of the site within the landscape.

The usage of heritage after conservation and preservation measures is one of the issues frequently leading to debates in academic societies as well as praxis oriented groups. In this respect, the uses of heritage can be divided into (directly) structural and (indirectly) historical uses. This can be more generalized as scientific (academic) and recreational (aesthetic) uses.

4 EMPIRICAL RESEARCH: SURVEY AND ANALYSIS

In the scope of this dissertation, a research excursion was conducted at the archaeological sites in the west Aegean part of Turkey. The excursion grant of “Bund der Freunde der Technischen Universität München e.V.” has provided the financial support for the research. The results of this analysis constituted the empirical data of presentation types at archaeological sites for which the hypotheses and the facts are verified in the next chapters.

In this project, it was aimed to find out approaches towards landscaping and presentation at archaeological sites focusing on different perspectives of related professions. In doing so, it was intended to search for relations between cultural heritage conservation and presentation of archaeological landscape. It is of essential importance to understand the concepts of archaeological activities in order to set comprehensive planning and management objectives. For the purposes of this project, questionnaire-based interviews were carried out with archaeologists and museum directors. The questionnaire is subdivided into four main interrelating aspects. Landscape and presentation aspects aim to focus on the concepts of archaeological activities. Landscape architecture and planning aspect pose questions about the future oriented planning developments in protected zones.

In order to analyse and categorize methodologically the research material, the principals of discourse method were chosen.

4.1 Methodology and terms

In everyday speech, discourse is seen as synonymous with discussion, or is at best understood as a “mode of talking” (Hajer 1995: 44). But from a scientific point of view, it involves the context of the statements; actors participated in the discourse and the social backgrounds. Hajer (1995: 44) states that the discourse is then seen as an ensemble of ideas, concepts and categorizations which are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities. In this respect, it deals with the social constructivism of definitions accepted as false or true in its own thematic content in the community rather than seeking for a particular truth or falsity in a logical sense.

Discourse events do not represent a homogeneous population of isolates which can be sampled in the statistical sense. Every discourse event is unique. Discourse events are aggregated by the researcher for particular purposes and by stated criteria. There are as many possible principles of aggregation as there are culturally meaningful dimensions of meaning for the kind of discourse being studied. There are many schemes for systematising the probably relevant contextual factors of a text or discourse event.[27] They all include the participants and their social and physical

[27] For more information about Discourse; see Erickson & Shultz 1981 and Hymes 1972.

relationships, material objects and semiotic representations in the immediate physical environment, the cultural definition of the activity type or situation and its roles and expectations, and the channel or medium of communication.

Discourse analysis aims to construct common patterns, general norms such as typologies and interpretation patterns for everyday situations through concrete speech acts (*Sprechakten*). Speakers, statements (form and content) and listeners are the basic components of a discourse (Keller 1997: 312). According to Potter/Wetherell (1987) the methodology of a discourse analysis is developed in ten steps: setting of research questions, sample selection, collection of records and documents, interviews, transcriptions, coding, analysis, validation, report and application (Keller 1997: 325-326).

Argument on specific problems between certain *actors* constitutes the base of the discourse analysis. *Story-line* combines the different discourse parts, actors and the way of handling the problem. Each discourse has a set of corresponding themes or questions. According to Hajer (1995: 56), a *story-line* is a generative sort of narrative that allows actors to draw upon various discursive categories to give meaning to specific physical or social phenomena.

Frames relate to the central argumentations which the actors use in the discourse. They form the substantive part of their statements. In this scope, ten different frames were identified, in which the relating story-lines were expanded. Ultimately, *summary* is established by the conclusion of statements within the frames.

Discourse data is not just sensitive to the context of immediate task and situation; it is also sensitive to the wider context of cultural norms and assumptions, knowledge, beliefs and values. In this sense, the interpretation of the data combines the researcher's viewpoint with the material obtained during and after the excursion.

4.2 Archaeological sites

The roles of actors in the discourse are represented by the locations (archaeological sites) at the west Turkey. These archaeological sites are the following: Aphrodisias, Didyma, Miletos, Priene, Ephesus, Hierapolis-Pamukkale, and Pergamon (Figure 4.1). These sites constitute the discourse base reflecting the arguments of interview partners. The relevant components of the first four sites will be briefly summarized in this chapter. Ephesus, Hierapolis-Pamukkale and Pergamon will be deliberately examined in the fifth chapter as case study sites to illustrate concrete planning proposals for archaeological landscapes.

The selection of the sites on the same region is based on two purposes. The first one is the convenient location and transportation between the sites, and furthermore it is possible to combine the routes and organized tours in a daily trip. The second reason is to provide the cultural and historical link between the sites. In addition, each site reveals various characteristics in terms of size and visitation intensity variables, as well as visual quality of remains and natural features.

Figure 4.1 Western Anatolia. The archaeological sites are located at the west coast of Turkey (1998-1999 Microsoft).

Aphrodisias

The ancient city of Aphrodisias is one of the most remarkable archaeological sites of the Hellenistic and Roman periods in Turkey. Aphrodisias lies in the Meander River basin, in a fertile valley 160 km southeast of the port of İzmir.

Unlike Pergamon or Ephesus, Aphrodisias was not a great metropolis in antiquity. The ancient city dates back from late Hellenistic times to the early 3rd c. A.D., when most of the public monuments of the city centre were built, and most of the public sculptures and inscriptions found at Aphrodisias were produced. The location and the size of the city differed from other ancient cities. However, it is exceptionally well preserved, giving both visitors and interested scholars an unusually full and evocative image of an ancient city (Ratté 2001: 117). Consequently, due to the small sized compact area with relative rich free standing and conserved heritage and remarkable good preserved vegetation pattern, Aphrodisias attributes to an archaeological park concept.

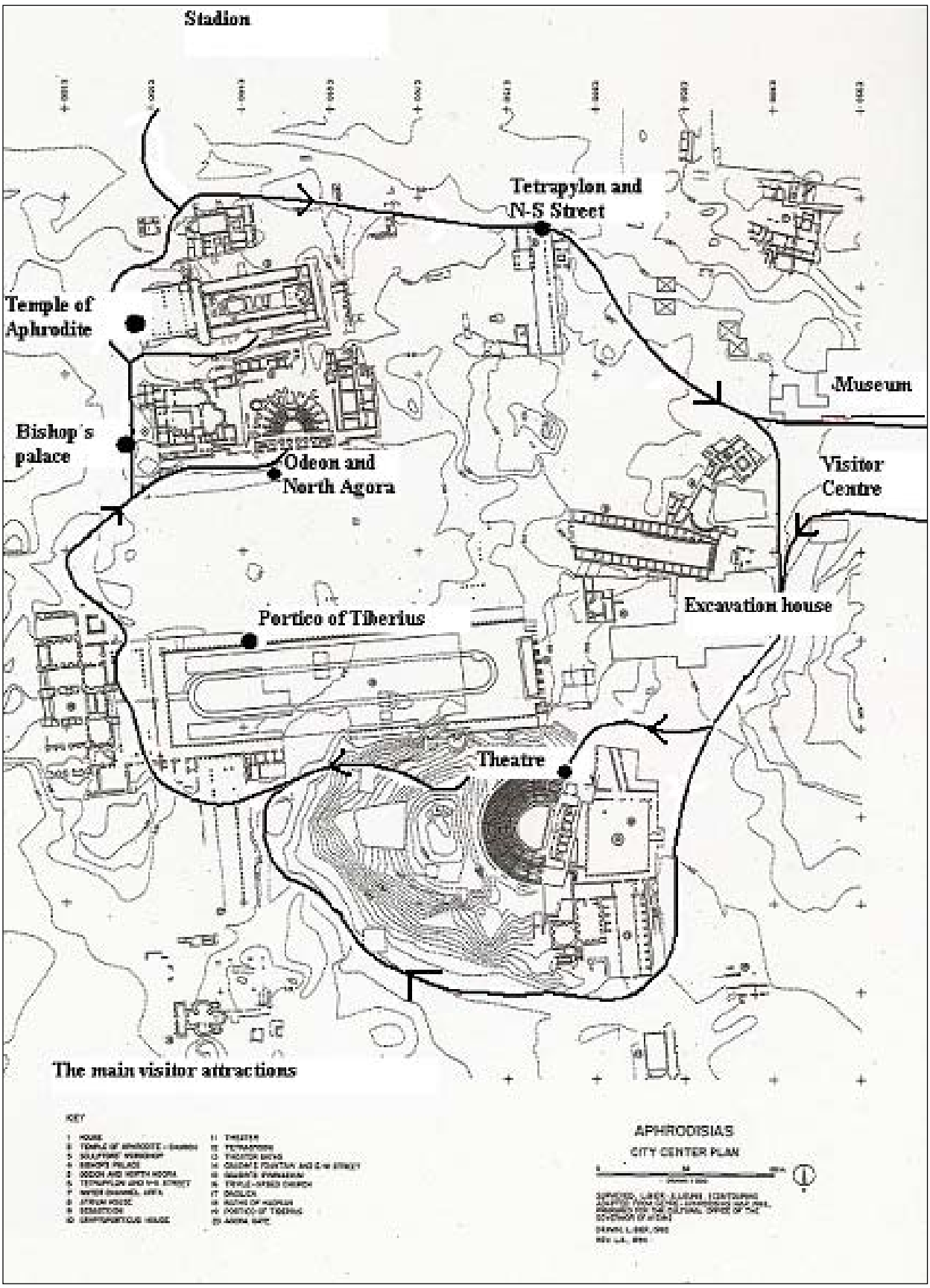

Figure 4.2 The plan of Aphrodisias and the new tracing at the archaeological site: The marked line indicates the current visitor route around the archaeological site. The main tourist attractions are displayed along the visitor route. The archaeological and non-archaeological parts are separated through planning spatially and structurally visible patterns (Courtesy of Aphrodisias Archaeological Excavation 2003).

The archaeological site Aphrodisias differs from the other displayed ancient sites due to its distinctive spatial organization. The spaces for tourist facilities and archaeological site are separated not only for their functions and structures, but also for their design patterns.

In this sense, the site can be divided spatially into two parts. The first part of the archaeological park (non-archaeological part) shows the characteristics of an archaeological park, while the second part (archaeological part) presents the partly restored or reconstructed remains involving some planting patterns.

The archaeological site is presented through a specific routing pattern in its current context planned by the excavation team aiming to orient the visitor in a looping system (Figure 4.2). By this way it enables visitor to follow the route accurately as well as to comprehend the ruins in a particular context. The circular routing helps to reduce double walking of paths. The retraced paths through the ruins of ancient city are marked by the adequate treatment of the surface. Parking area located outside the site is also paved and planted offering a shelter against sun and dust.

The *pocket* park closed to parking area and entrance offers protection from the sun as well as resting during waiting for the groups. The street from the entrance along the planted avenue decorated by antique objects on both sides leads to the site centre, a sort of courtyard-shaped space where the museum and tourist facilities including café, WC, tourist information, shops and post are placed harmoniously in a homogeneous area (Figure 4.3). The space is paved and decorated with the remaining ancient structures enclosed by trees serving for a focal point of interests of tourists. In addition, the excavation house, storage and residences for member of archaeological site staff are also located around the centre.

Figure 4.3 Aphrodisias; view from the “non-archaeological part”. On the left side; house of excavation director, in the middle, WC and on the right side; café and seats.

The research and excavation are in progress, the archaeological evidence for city layout continues. Therefore the present landscaping concept on the site should recognize this and enhance the quality of the existing natural formation. The routes linking the monuments and key view points should be improved in planting patterns.

One of the main attractions of the site is the restoration (Anastylosis)[28] of Tetrapylon (Propylon). In recent years, the space around the restored monument has been cleared out and converted into a grassed area through re-planting.

Figure 4.4 Tetrapylon in the archaeological landscape of Aphrodisias

Figure 4.5 The tomb of Prof. Kenan Erim, the initial excavation director of Aphrodisias, situated near the Tetrapylon, have been thoroughly landscaped and planted.

[28] Anastylosis: Archaeological reassembly of ruined monuments from existing fallen or decayed fragments. Its goal is to reconstruct an object from surviving fragments. New materials can be incorporated when necessary such as filling in or gaps of integration of segments added for purposes of stability and security (Brockhaus 1996; Schmidt 1993, 2000).

The tomb of Prof. Dr. Kenan Erim, the initial excavation director of Aphrodisias, situated near the monument, have been thoroughly landscaped and planted. This area is regularly maintained, mowed and watered in the manner of a park (Figure 4.5). The green flat texture of smooth ground surface emphasizes the white marble columns creating contrast but restful effect, forming and contouring the small area.

The economical value gained by the archaeological site is closely related with its immediate environs. Like in the antiquity, the site and the modern village still is situated in isolation, although the valley is fertile but remote from the tourist centres. Today, the largest town in the valley has a population of 6,000 or 7,000, half that of ancient Aphrodisias (Ratte´ 2001: 146). The economy of the region still depends on the agriculture. However, in recent years the economic value of the archaeological site has been recognized as an essential historic - tourist centre which in turn will promote sufficient tourist-based infrastructural undertakings in terms of planning activities enhancing the historical site as well as local settlement in balancing the preservation and use of the historical environment and the local traditional context.

Didyma, Priene and Miletos

Didyma, Priene and Miletos are situated in the Grand Meander (*Büyük Menderes*) flood plain along the same route from south to north direction in the south-west corner of Turkey. The topographical similarity connecting them leads to convenient visitor facilities relating with transportation and accessibility. The link through corridors of tourist movement between Didyma and Ephesus can be worked out to establish a comprehensive landscaping proposal including the whole route and their locality.

The Aegean region of Turkey implies the features of Mediterranean climate with hot dry summers and warm wet winters. 70 percent of rainfall is recorded in the winter months between November and March (Tutthas 1995: 14).

Kuşadası (see Figure 2.3, p. 44) which has become a most sophisticated and well equipped holiday resort is an ideal starting point towards the famous places of interest of the region Ephesus, Miletos, Priene, Didyma, Aphrodisias and Pamukkale.

The main street leading to the region is İzmir-Aydın Highway D-525. Whilst the existing road connection, namely Söke-Akköy road between Didim, Miletos and Priene are relatively well-organized, the visual impacts on the landscape are minimized.

Particularly in the recent years, Didim and Akbük, lying in the south coast of Miletos has been noticeably developed in tourism through hotels and tourist villages, which has raised the tourist interest on these ancient sites.

- ***Didyma***

Didyma can be considered as the first station for visitors on this so-called archaeological route. It is located in the present-day village of Yeniköy, 16.4 km south of Miletos. Didyma lies on a limestone plateau of the Milesian peninsula to the south of Miletos with which it was once connected by the ancient Sacred Way (Prozessionstraße). This place was chosen due to the existence of a sacred spring at this point (Greave 2004: 110). The Sacred Way, of which a segment is visible in the northwest of the site, appears to have passed here (Schneider 1996: 1). The beginning of the temple construction dates back to 7th c. B.C till 7th c. A.D. (Tuchelt 1994: 14)

Didymaion, the temple to Apollo and its oracle at Didyma (Figure 4.6), the sanctuary of the ancient city Miletos is today almost located in the proximity of the modern town Didim, only 1 km far away from the city centre and 3 km from the coastline where the summer vacation houses and hotels are situated. The temple area of Didyma covers 6.600 m² and so it is one of the biggest religious structures of the ancient world (Tuchelt 1994: 2-3). The village around the temple which was developed during the nineteenth century enlarged to the inland and coastal zone in the mid-twentieth century. The following social changes and interests have also affected the contemporary values and usages of historical settings, in this case positively, as the temple served as an important source for building material in the ninetieth century. The raising interest for the coastal region and accordingly the increasing tourist number has affected the preservation, presentation activities and access of the remains which in turn focused on the visual and spatial value of the heritage.

Figure 4.6 Didyma Temple; Didymaion

The present-day remains of the temple Didymaion convey striking views from ancient times. By all means, in its current physical setting, Didyma does not represent the (authentic) ancient landscape once it was built on. On the ground, the site seems a confusion of stones, standing and lying showing the character of a working excavation site. The vegetation at the site consists of region-typical trees

such as fig, olive, cypresses and wild pear trees which are mostly located on the fringes of the site. Conceivably a sacred grove might have taken place around the sanctuary. The landscape around the temple contains traces of ancient human activity; however they are now invisible on the surface. The surroundings of the site are encircled with houses, pensions and restaurants that is particularly characteristic of a tourist town developing as commercial districts in other Mediterranean regions as well. The road, built at the end of the sixties, passes immediately closed to the archaeological site which in fact crosses the archaeological site and so it prevents expansion for further research and appropriate site use.

Hence, the archaeological site receives high amount of tourist interest. One reason for this is the location of the site. It is a favourite coastal district of national and international interest. However, the lack of detailed information and presentation of findings from the excavations impair the value of the archaeological site as an important spiritual place with sacred ceremonial for the ancient cities in the proximity. The ideal solution could be; to make open space around Didyma, to provide facilities at a better distance so that the temple can be perceived from a far distance, as ancient people must have done. But in the contemporary situation, the temple can be better displayed from the site by organizing the ruins lying on the excavation site. At the fringes, temporal replanting enables the visitor to view the temple in its setting. An external visitor centre with museum can enhance the qualities and the importance of the site stressing the archaeological network at the region. Additionally, it should concern not only its human artefacts but also the environment and the archaeological landscape such as the connection between the temple and the ancient city of Miletos.

- ***Miletos***

Likewise Ephesus and Priene, the altering geographical formations and land-use have played an important role in the history of Miletos. The finest archaeological monuments visible today at Miletos all date from the Roman period (31 B.C. - 337 A.D.) (Greave 2004: 137). Ruins remained from Byzantine and Islamic period can be seen at the site. The İlyas Bey Mosque is remarkable for its plain plaster surface of carved stone situated in idyllic setting of plant cover (Figure 4.7).

Figure 4.7 The İlyas Bey Mosque built in 1411-1416 A.D. at the archaeological site of Miletos. Beside the ancient structures, buildings from Ottomans embedded in the landscape can be also seen at Miletos.

After the Persian invasion in 494 B.C, the redevelopment of the city was attributed to the architect Hippodamos of Miletos (498 - 409 B.C.) (Tuttahs 1998: 7; Greave 2004: 79-81). He developed the orthogonally grid plan with straight streets intersecting to form quadrilateral city blocks (Figure 4.8).

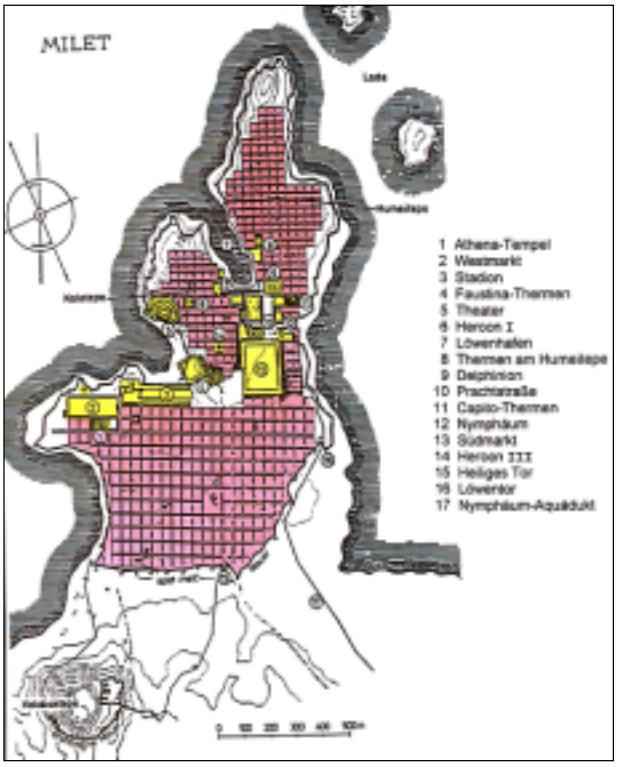

Figure 4.8 The ancient city plan of Miletos. (After A. V. Gerkan; Griechische Städteanlagen 1924 in Tuttahs 1998: 4).

Ancient Miletos, a coastal city, has been transformed into an inland marsh by the wanderings of Meander River. The mouth of the Grand Meander (*Büyük Menderes*) River has moved progressively southwards and eastwards the Aegean due to the

large amount of silt being carried down from the mountains. Over the centuries Miletos has become 9 km distant from the sea, and the Gulf of Latmos is now a freshwater lake called Bafa (Gorman 1993: 11) (Figure 4.9). This large, flat, fertile and well-watered alluvial plain is now used for the intensive production of cash crops; almost exclusively cotton (Brinkmann *et al.* 1991; Greaves 2002: 16). The large cotton fields have shaped the recent landscape in the region.

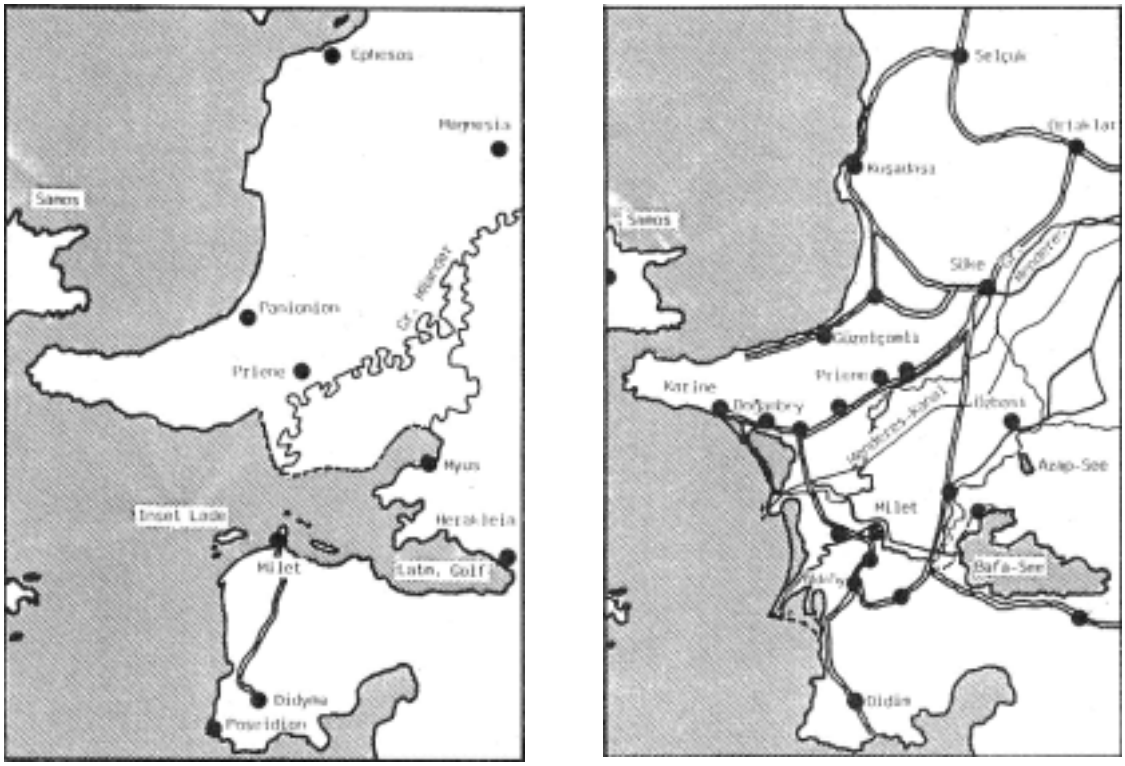

Figure 4.9 The coastal change. Between 500 B.C. and 500 A.C. the delta coastline moved as a result of silting (Greaves 2002: 7). The Meander River created the rich alluvial plain of Söke by meandering all over the valley. On the left present-day situation and on the right past situation (Brinkmann *et al.* 1991: 10)

The archaeological landscape of site can be divided into three zones: the coastal foreshore, former harbour, and the archaeological site. This region with low hills and small valleys, basins and mountains around Miletos, in particular east of Miletos; İlbir Dağı (mountain) encompasses prosperous topographical and ecological features that provide a variety in the landscape to observe and experience. Miletos should be considered as the focal point for the wider landscape of the Grand Meander (*Büyük Menderes*) basin, accordingly this rural landscape should additionally be introduced to the visitor. The ecological values are as rich as the archaeological and visual features in the region. Meander delta including Dilek National Park is an important natural environment for flora and fauna, in particular for bird species. Brinkmann *et al.* (1991) report about the ecological state of the Meander delta including native species of flora and fauna and discuss the concept of nature-tourism in the region (Figure 4.10).

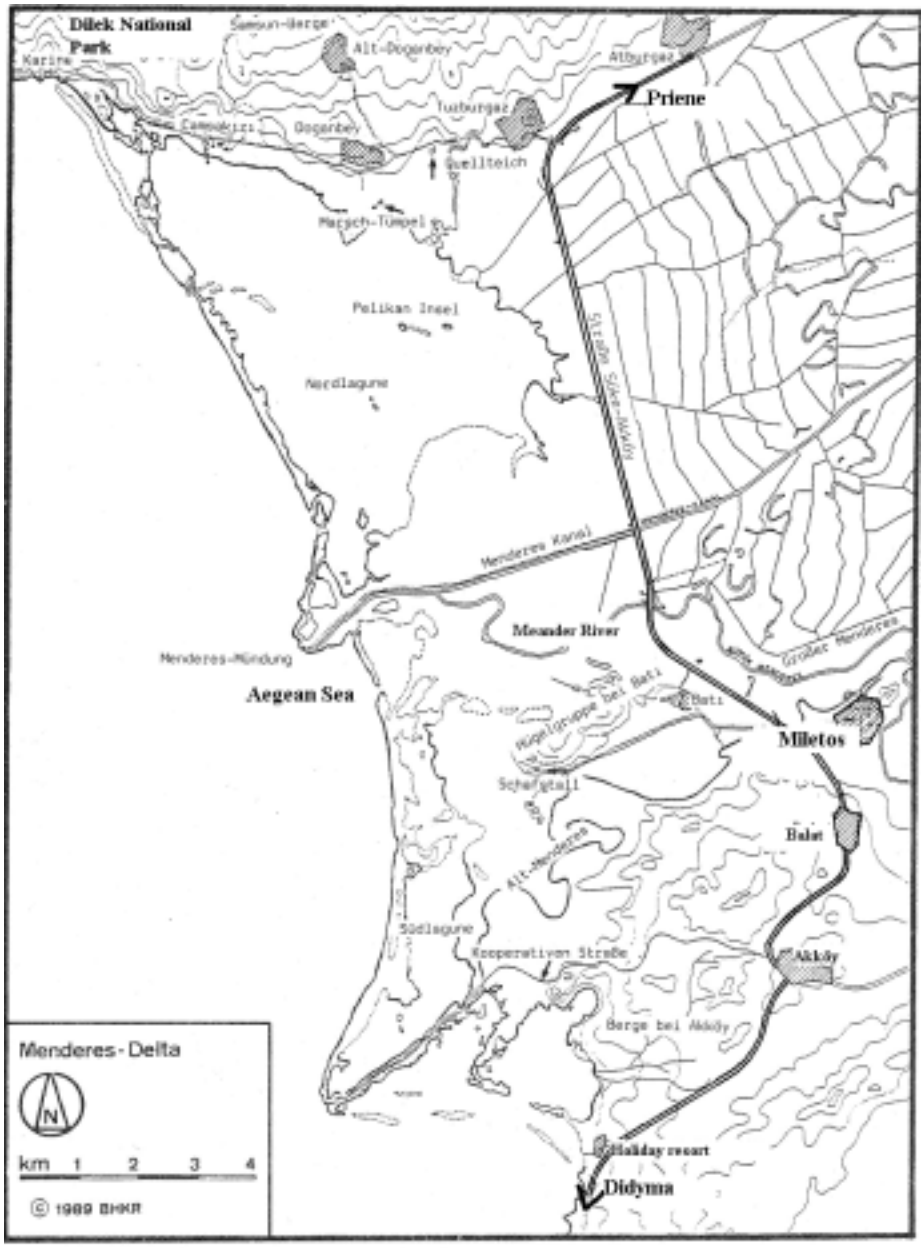

Figure 4.10 The location of ancient city Miletos and the landscape formations in the region. The Meander plain is situated between the archaeological site and the Aegean Sea. The landscape of site can be divided into three zones: the coastal foreshore, former harbour, and the archaeological site. The plain fed by Meander River is rich in ecological qualities. In the north, Dilek National Park takes place. The upper part of Miletos is largely covered by agricultural areas used for the intensive production of cash crops; almost exclusively cotton (After Brinkmann *et al.* 1991: 5).

The archaeological landscape abounds with maquis scrub, including laurel (Laurus nobilis) and evergreen oak *(Quercus coccifera)*. The quick growing maquis prevent soil erosion, and provide rough grazing. At Miletos, the great amount of precipitation in winter leads to flood and over-growth of vegetation cover, above all the invasive plant species which impair the artefacts and cover the excavation site with wild vegetation growth (Tuttahs 1998: 17). Through periodic flooding on the site, *Tamarix* bushes spread on the site in spring time. They grow on the sandy ground with a poor salty content which provides optimum growing conditions for *Tamarix*. They are cleaned out for commercial purposes. Drainage and irrigation can be

managed through water canals and reservoirs using natural river braches or sources. Through grazing the growth of maquis and other plants can be controlled, but on the other hand it impacts the regeneration of the plant species, in extreme cases intensive grazing can cause complete degradations. Moreover, it leads to plant species with underground tank systems which can spread easily raising problematic situations.

Figure 4.11 View of the fertile plain of the Grand Meander (*Büyük Menders*) Valley.

Miletos was famous for its timber production on the uplands used for contruction of ships, houses and furniture. The pollen analysis has confirmed that Miletos had areas of pine forests in its territory. The mixed pine and cypress woodlands still exist in the present landscape. The fertile plain of the Grand Meander (*Büyük Menderes*) River was cultivated by the ancient cities such as Ephesus, Miletos, Priene, and Magnesia in the region. Crops, vegetable, fruits and herbal plants take an important part in cultivations (Figure 4.11). Above all, the region is rich in herbal, aromatic and therapeutic plants (These will be comprehensively listed in Chapter 6, see p. 157) (Gemici & Seçmen 1998). One of them are the licorice plant (*Glycyrrhiza glabra)* which has been known and used from antiquity to the present time[29] and this species still exists in the region and is used as an important herbal plant. They are mostly found on cultivated fields and alluvial plains in the region (Öztürk *et al.* 1990: 138). Myrtle (Myrtus communis) is also abundant in the region.

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29 http: ***www.ibiblio-org/*** herbmed/eclectic/Lloyd-licorice.html: Reprinted from The Eclectic Medical Journal, December 1929, John Uri Lloyd, Cincinnati, Ohio. ”The notes of John Uri Lloyd who travelled through Turkey in 1906”. He wrote: “Theophrastus refers to a sweet Scythian root, growing near the lake, Maeotis (Sea of Azov), used in cough and pectoral affections. Dioscorides gives it a place, describing two varieties of the plant, while the Roman writers, Celsus and Scribonius Largus, call it the sweet root, *Radix Dulcis*. Pliny, of course, met it in the sections about his own country, and describes is as native to Cilicia”.

Laurus nobilis, *Ulmus minor ssp.*, and *Nerium oleander* like moist locations and they can be used along the gravel paths. *Campanula tomentosa*, an endemic plant, can be found in the edges of ruins and stones. *Pistacia lentiscus* (mastik tree), *Capparis* (caper), *Punica granatum* (pomegranate), *Pyrus communis* (wild pear), *Laurus nobilis* (laurel), *Pistacia terebinthus* (terebinth tree), *Cistus* (rock rose), *Rosa canina* (wild dog rose) as well as distel species and other *phrygana*-like bushes are typical for the archaeological landscape.

At the archaeological site of Miletos, by means of a tourist facility concept plan, tourist routes on the ancient tracing and information panels on the key points were implemented (Figure 4.12). The purist presentation concept aims to protect and display the ancient structure in its ruin state.

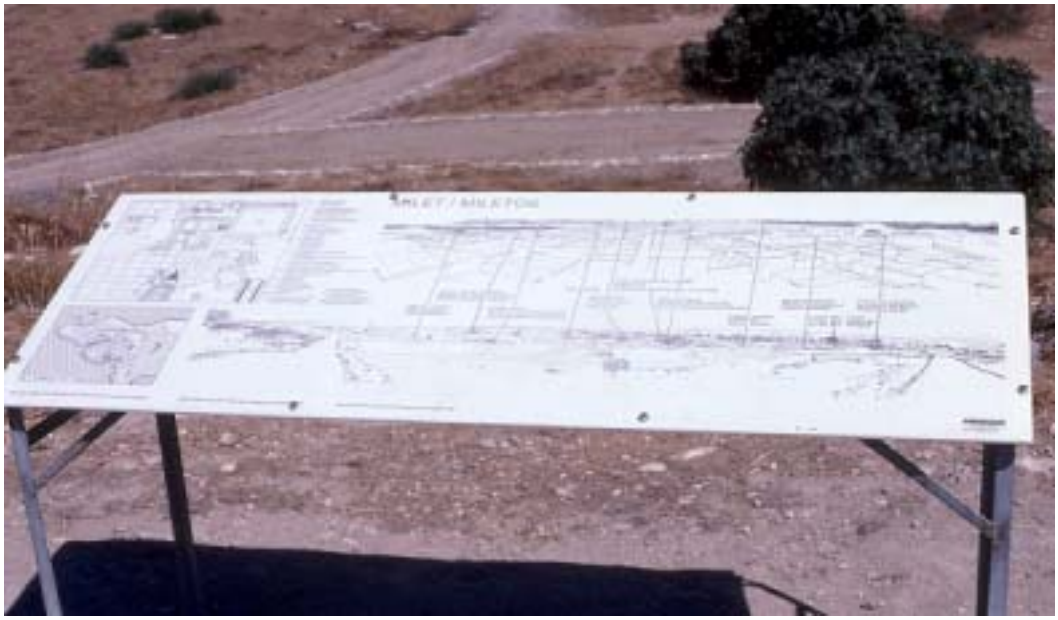

Figure 4.12 Information panels with graphics for the visitor orientation at Miletos. At the background; new visitor route implemented on the ancient street.

- ***Priene***

The ancient city of Priene is located on a slope at the foot of a great cliff of rock, south side of Samsun dağı (Mountain Myklade). Priene, situated some 20 km from west of Söke and İzmir-Çanakkale highway lies on the hills (350 m high) of the small village Güllübahçe. The present-day ancient ruins date back to 350 B.C. built on the south exposure. Unlike other sites, Priene possesses remains of a good protected Hellenistic site in a natural environment. The ruins of Priene present one of the most striking examples of the grid type of town-planning associated with the name of Hippodamos (Schede *et al.* 1964: 1-9, Raeder 1983: 8-9) (Figure 4.13).

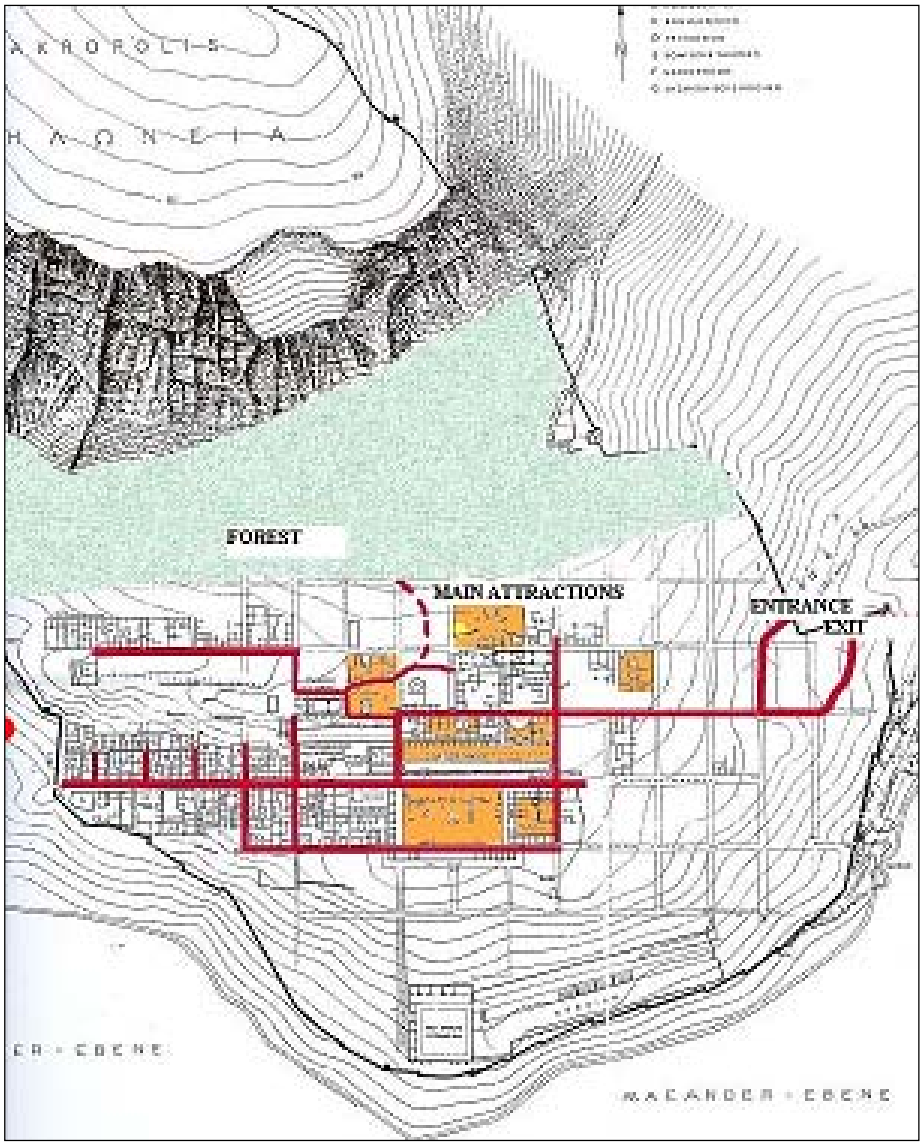

Figure 4.13 The plan of ancient city of Priene (After the excavations in 1895-98 under direction of Theodor Wiegand and Carl Humann by Kummer G. and Wilberg, W.). The marked line shows the current visitor route tracing the ancient streets of Priene. The coloured structures are the main attractions on the site. Archaeological site is surrounded by dense existing woodland covered with *Pinus halepensis* and maquis cover. The Meander plain, seen on the opposite side restricts the site on the south side. The vegetation is also an important environmental value for the landscape. The Meander plain, former sea harbour, displays the slowly but dynamic changes in the landscape formations during the course of time.

Priene had remained inland because of the rising level of the land, due to its filling up with alluvial deposits. The city possessed two harbours, but both of these became silted up by the alluvium brought down by the Grand Meander (*Büyük Menderes*) River (Figure 4.14). Priene was a small city, that it was situated on a peninsula close to Miletos and that it had two ports. The city is planned on a strict grid, in accordance with the "grid system" developed by architect Hippodamus of Miletos defying the steeply sloping topography of the site and imposing a rational human order on the landscape. Its well-preserved remains, with its temple of Athena, well-planned agora, theatre, stadium, gymnasium, fortification walls and many excavated houses, form one of the best examples of a small Greek polis.

Figure 4.14 View from the slopes of archaeological site Priene, the former harbour city, to the fertile valley of Büyük Menderes which is a result of sedimentation process.

The archaeological landscape of Priene can be divided into three zones. The first one is the archaeological structures surrounded by mixed pine forest on the terraces of the cliff; the second one to the north of the site is the cliff of rocks implying the topographical importance of the place (Figure 4.15). The last one is the Grand Meander (*Büyük Menderes*) River and its plain with agricultural landscape patterns which had played an essential role in Priene´s history whereas the form of Meander was used on the ancient coins as a landmark for the city (Schede *et al.* 1964: 2). Beşparmak Mountains and Meander plain are the key landscape formations of the archaeological landscape. The ancient city layout is consisted of different layers with terraces, straight streets on uneven terraces and diagonal streets with stairs.

Figure 4.15 Athena Temple at Priene contoured by rock formations.

Under the leading Mediterranean deciduous trees; *Quercus ilex, Quercus coccifera, Olea europaea, Ceratonia ciliqua and Pinus brutia* (Mayer & Aksoy 1986: 23) are the most common species. The dominant vegetation includes mixed pine woodland including *Pinus brtuia*, *Pinus halepensis*, and *Pinus pinea* in the form of a natural background for the ruins. The topographical formation of the site has already confirmed the land-use, also in the present time. In stead of additional planting or afforestration of the boundaries, the present land form and vegetation cover should be protected in its natural form besides the maintenance of the site. In Priene, a good example for the Hellenistic period city in Asia Minor, the houses have an open courtyard with a porch fronting the main room (*prostas*), but there is no evidence for gardens exists. According to Macdougall & Jashemski (1981) the city plan had included an empty space near the walls which is assumed to be filled with trees. In addition, due to the rocky nature of the surrounding, the cultivation had likely taken place on the plain of Meander (Macdougall & Jashemski 1981: 11).

Priene retains significant archaeological, historical and landscape aesthetical qualities. This means, apart from the archaeological resources, the natural topography and vegetation provide a specific character leading to a natural formation of paths, stone walls and steps as well as a striking background covered with dense vegetation. Due to its physical state the site is cushioned from the environmental impacts of tourism and land-use. The tourist facilities are restricted with restaurants and cafes in the village of Güllübahçe. In the ancient site of Priene, this attribute has helped to preserve the ancient character of the landscape to a great extent, distinguishing the spatial character.

Entrance of the site has a vital importance in presenting the archaeological site. In case of Priene, where parking space and entrance are situated together, the design should aim to represent the archaeological site character. As the visitor is initially introduced to the archaeological site at the entrance, this space should communicate with the visitor (Figure 4.16).

Figure 4.16 Parking spaces at the entrance of the archaeological site of Priene (Hennemeyer 2004).

4.3 Questionnaire

The discourse consists of interviews conducted with excavation directors, archaeologists and museum directors at the archaeological sites mentioned above. The interviews with excavation members were carried out by self-administered questionnaire, a commonly used technique used to obtain a common understanding and response to the related field.

Planning Approach

- Can an interdisciplinary work be involved in the decision making process within the scholarly excavation activities? If so, with which professions do you collaborate?
- What is the concept of your archaeological activities? Is there a specific approach carried through the archaeological site research activities?
- Is there collaboration or consultation with the local communities (Municipalities, private firms as well as universities) in terms of establishing master plans in local and regional scale for the archaeological area and its environs including the nearby contemporary settlements?
- “Balancing the many, sometimes conflicting demands affecting the archaeological resource and developing a positive approach to its preservation and conservation, are known as archaeological resource management” (Darvill 1987: 1). In this respect, to which extend can archaeological heritage management be implemented or at least a framework developed to be used in conservation management?

Landscape Approach

- What are the most particular or outstanding features of physical features of the historical landscape? Are there specific values revealed in the landscape which is involved in the archaeological setting and landscape concept?
- How can landscape features with the archaeological heritage be integrated in terms of presentation aspect?
- What are the most serious challenges faced by the archaeological research activities regarding with the physical natural characteristics of the site, in particular landscape features such as vegetation, topography etc.?
- What kind of problems arise during and after the excavation works?
- Which values influence the landscape of the site?
- What is the approach to the vegetation at sites? Can it be used as a design element?

Presentation Approach

- To what extend is it of importance to display the remains within a comprehensive presentation strategy? Is it a desired objective within the archaeological activities?
- What kind of presentation is more appropriate at archaeological sites?

Fully presented sites with interpretation approach including carefully planted displays and thoroughly planned visitor facilities,

Purist presentation; keeping the natural state of ruins,

Archaeological parks, open air museums,

Establishing archaeological network in a regional scale.

- Which values are to be preserved?
- Do aesthetic values play a role in archaeological activities including conservation?

Landscape Architecture

- To what extend is it possible to widen the scope of the planning activities at sites?
- A substantial part of the future-orientated goal of a site that is to be undertaken within the scope of the activities appears to be public display including presentation and development. Is archaeological site economically valuable for its own sake as much as for the local public?
- Can recreational or leisure-based activities impact the scientific undertakings at sites?

4.4 Results

The results of the empirical research are analysed by discourse method emphasizing three key landscape issues. The research material is composed of interviews with the archaeological site directors and museum directors as well as field observation notes, photographs, videocassette, site plans and reports. The discourse is based on the research material. Each discourse is briefly described and consequently the summary of the discourse is illustrated by discourse tables (Table 4.4.1, Table 4.4.2 and Table 4.4.3) with a discussion topic and by this way the differences or similarities can be compared with each other.

The results provide establishing two points of views. The first one aims to obtain a broad approach towards landscaping and recreational activities at archaeological sites, and the second one intends to find out characteristics and accordingly prototypes of current state of sites in terms of presentation and tourist facilities in particular cases. As a consequence, it is attempted to identify prototypes rather than to compare the variables on sites such as tourist dispersal and behaviours of visitation as each archaeological site has its own characteristics and research concept.

Discourse "Planning Aspect":

Discourse "Planning aspect" deals with the approach of archaeology-based work towards planning issues on the archaeological sites including site management and conservation issues. It is aimed to find out the collaborations between planning disciplines and archaeological activities. Each archaeological site is distinguished by a particular concept for the current undertakings. The idea of archaeological resource management is appreciated by archaeological site directors, nevertheless practice of such a concept needs professional and financial support.

At Hierapolis, the current archaeological activities concentrate on the excavations and restorations. The organization of the site for the public is also an essential point in the archaeological activities. Pamukkale Preservation and Development Plan worked out by a private planning office from Ankara has been partly implemented since 1990. The improvements and reinventions on the plan still continue coordinating with UNESCO. At Aphrodisias, by means of landscape architecture, the site was turned into an archaeological park. The archaeological activities focus on the residential part of the ancient city. At Didyma, Priene and Pergamon, apart from the standard visitor facilities carried out by the Turkish Ministry of Culture, there were no contributions to the planning issues. At Miletos and Ephesus, particular concepts for visitor facilities have been developed by archaeological institutes in Germany and Austria.

The discourse result indicates to the fact that more than half of the archaeological material is presentable and therefore accessible to the public. As a consequent, new matters have been emerged from the usage of the site which deals particularly with the maintenance and development in order to provide its sustainability for the future.

Table 4.4.1. Discourse "Planning Aspect".
Story-line: Development of a planning concept at archaeological sites.

Interview partners:	Hierapolis	Aphrodisias	Didyma	Priene	Miletos	Ephesus	Pergamon
Framing							
Interdisciplinary work in terms of landscape studies	• Pamukkale preservation and development plan by city planners. • Turkish Ministry of Culture. • Landscape plan of natural site by University of Pamukkale, Denizli • UNESCO	• Landscaping of the archaeological site by landscape architecture students from USA.	• Landscape archaeology.	• Archaeo-botanical and paleo botanical research.	• Planning of tourist facilities to organize the site routing and information boards.	• Infrastructural tourist facility plan.	• Master Plan was established by USA National Park service, but it was not implemented.
Concept of archaeological activities	• Main ancient street is intended to be unearthened and used as main routing.	• Articulations between monuments and city plan is examined.	• Conservation of Temple continues. • Sacred way between the Temple and Miletos is researched.		• Research on the ancient city plan. • Organization of the visitor routes.	• Research and publications. • Development of a tourist facility plan.	• Ancient city plan and their relation with dwellings are examined.
Archaeological Resource Management (ARM)	• ARM is within the preservation and development plan.	• ARM is expensive but future-oriented. • Museum onsite is the part of ARM concept.	• It is regarded as time organization.	• ARM is mentioned as a part of heritage conservation concept.	• The whole excavation concept is based on a management concept.	• ARM is a concept involved into the tourist facility plan.	• ARM should be involved into the research program and development plan of the region.

Discourse "Landscape Integrity"

It is based on the natural resources, their qualities and problematic situations based on natural features arising during excavation activities. The story-line encompasses the concept of landscape resources and their qualities relating with the archaeological activities. According to this viewpoint, natural features and their assets as components of archaeological sites is discussed. Its aim is to assess the visual as well as the physical qualities of archaeological landscapes in making decisions for planning purposes. In general, it is agreed that the natural features are considered as a supplement to the visual quality of the displayed ruins. Nevertheless, they lead to one of the main problems during and after excavations relating to the maintaining of cultural and natural resources. Moreover, the approaches to the vegetation treatment in historical and natural environments are here to be compiled.

At Hierapolis, due to the excessive usage of rich natural and archaeological resources, preservation measures should be taken to prevent deterioration and pollution of the resources. Vegetation varies from the afforestrations by Turkish Ministry of Forestry to the natural flora which should be preserved within the archaeological landscape. At Aphrodisias, the approach to the vegetation appears to be undemanding but effective. As long as the plants do not destroy the ruins, they are likely to remain on their location. Replanting is also implemented in order to enhance the effect of ruins on the site. Yet, inadequate water and strong vegetation constrain the planting and excavations. At Didyma, the overgrowth of trees, particularly fig (*Ficus carica*) trees damage the ruins. Replanting has been here also implemented, though the aim was not to create an ancient picture, but to emphasize the features of the site. Priene is located in a naturally rich environment which underlines the physical relief of the site. Therefore, the natural vegetation as the background of the archaeological area is protected under control and the plants in the site are mostly removed due to the deep spreading roots.

At Miletos, flooding in spring causes overgrowth of vegetation, in particular *Tamarix* trees. In so far, vegetation is not desirable, in particular re-planting which destroy the authenticity of the ancient picture as well as impact the archaeological structures. It is "absurd as there is no exact evidence for ancient gardening and planting". The physical features of Meander landscape is integrated into the historical setting context representing the wider historical assets as well as a sort of natural quality. The site is cleared of trees and scrub to reinstate its visual and spatial appearance. Furthermore a sort of shelterbelt reducing the risk of flooding and erosion could be appropriate for the site by retaining woodland replacing scrubs in particular *Tamarix* with broadleaves, evergreens or very low livestock where appropriate.

At Ephesus, besides the impacts of plants with spreading roots, agricultural practices in the surroundings of archaeological site pose threats to the protection of ruins. Human activity is regarded as the major effect causing threats through ploughing, footpaths and building. To reduce poaching by encouraging appropriate

use and techniques of existing arable land and grazing, environmental aspects of management should be also taken into consideration.

Pergamon has also similar problems relating with the natural vegetation. In addition to this, due to the steep slopes of the site, erosion arises as a serious problematic in conserving the ruins. Replanting is practised to accent the ruins as well as to cast shadow for the visitors. Maintenance of the site in winter months is one of the major problems existing. Managing through livestock grazing can be an alternative method to human craft. It offers not only a practical and cheap solution, but also improves the quality and structure of grassland habitat and its nature conservation value.

As a summary, in integrating the landscape values, the visual aspects of landscape, to a great extent, are taken into consideration. Nevertheless, planting is considered as a secondary aspect, mostly used as a supplementary element for enhancing the aesthetic qualities of the ruins. Yet, ecological and environmental impacts and improvements in the surroundings of archaeological sites should be also taken into consideration.

Table 4.4.2. Discourse "Landscape Integrity".
Story-line: Landscape resources and their qualities.

Interview partners:	Hierapolis	Aphrodisias	Didyma	Priene	Miletos	Ephesus	Pergamon
Framing							
Landscape values	• Topographical features. • Thermal water and travertine terraces.	• Archaeological landscape. • Vegetative cover is on the site.	• Ancient monuments at the modern cityscape. • Environs of the site are rich in natural as well as cultural resources. • (Bafa See, Miletos, Priene etc.).	• Rich vegetation. • Topographical features; rocks with valley landscape. • Meander valley and its history are readable at the slopes of ancient site.	• Meander valley and river. • Ancient topography. • Maquis is the dominant vegetation cover.	• Valley landscape. • Panayirdağı and Bülbüldağı (mountains) are incorporating archaeological topography.	• The modern cityscape of Bergama and the ancient landscape. • Rich vegetative cover around the archaeological site.
Problems caused by landscape features	• Archaeological site is constantly damaged by excessive and disrespectful visitation. • Geological features lead to difficulties in excavations.	• Watering. • Vegetation.	• Overgrowth of vegetation (Ficus carica). • Sunlight damages the ruins (climatic conditions).	• Deep roots of plants are removed to prevent damaging buried archaeology.	• Flooding in spring. • Consequently overgrowth of vegetation (Tamarix spp.).	• Access to the site through agricultural practices in the region poses threats to the ruins.	• Erosion due to the steep topography. • Damaging plants are removed.
Vegetation treatment	• Replanting. • Removal of undesired plants	• Vegetation is retained in its state. • New planting to enhance the visual effect on site.	• Removal of plants. • Replanting to emphasize the characteristics of ruins (colour and texture).	• Controlling of plant growth. • Removal of damaging trees and scrub. • Preservation of natural vegetation.	• Controlling of vegetation. • Replanting is absurd as there is no exact information in ancient planting patterns.	• Maintenance of vegetation. • Removal of damaging plants.	• Vegetation control through grazing is a nature-friendly method. • Replanting aims to accent the ruins and to cast shadow.

Discourse "Landscape Design"

It concerns with the aspects of contemporary state of site, presentation and display of the monuments. The concept of landscaping and re-design on archaeological site is argued in terms of presentation of site for the public and conservation of natural and cultural resources. The result of this study has implied that a range of differences between conservation and recreation as well as similarities and consensus between presentation and aesthetical aspect emerges in decision making. Certainly it helps establishing comprehensive planning principles for archaeological sites. All of the interview partners agree on the importance of aesthetical assets and deliberate presentation of the site for the public. However, it is a fact that excessive usage of tourism damages the ancient structures. As a last point, issues about social and economic dimensions of sites were touched.

Due to the rich natural and historical resources existing on Pamukkale-Hierapolis, the site was planned as an integrated area in which both of the resources can be presented and conserved properly. According to the proposed planning aspects, a wide scope of visitor facilities including entrance and exit complex, transport services as well as display of ancient city Hierapolis by means of various communication methods are to be conducted. Momentarily, one of the main problems on the site arises as the disorganization of traffic and pedestrian routing which have not been accomplished yet. The site plays an important role in the economic income of local citizens. The villages Karahayıt and Pamukkale in the vicinity of the site receive their main income from tourism industry.

The ruins of Aphrodisias are displayed in the form of a park-like open area. The new tracing enables the visitors to see and comprehend the ancient structures in a spatially organized area. The tourist facilities mainly exist on the paved non-archaeological part in which museum, information, souvenir shop, cafe etc. take place. To an extent, archaeological site serves not only archaeology and architecture, but also a recreationally rich historical area in which visitor can enjoy the archaeological landscape. Economically the site does not bring much for the village as there are not enough accommodations and attractive facilities for the tourist. In this sense, such a site consists of integral spaces for rest and leisure set in an archaeological context.

The temple of Didyma is a unique structure displayed in the centre of a contemporary urban surrounding. An archaeological network linking to Miletos can be established through the sacred way. Tourist facilities encompass information boards and vista terrace. Ancient city Priene is situated in a natural park formation embracing forest stock. To some extent, the physical features define the shape and consequently the use of the site. In this respect, the spatial layout derives from landscape layout. Consequently, proposed tourist facilities can only be conducted outside the site. Integrated activities including wandering or climbing could be generated apart from the main objective of archaeological research and conservation of findings. At Miletos, in regard of preserving the authenticity of the ancient environment, any form of interventions referring to the physical appearance of the site is rejected. Archaeological landscape should be conserved in its current state and it should not be converted into "*Disneypark*" through heritage undertakings such as

reconstructions and visitor facilities. However, the greatness in size causes some measurements are carried through in order to provide a clear picture of the excavated site. One of them is to establish the ancient street system which will be used as a routing on the site by visitors. One of the main objectives is to reinstate the visual relationship with in the wider landscape. In the regional framework; Miletos provides some economical benefit with Didyma, Priene and Ephesus.

Ephesus epitomizes an open air museum in a large rural landscape as an example of a linear park. The ancient main street leads the visitors to the partially restored or reconstructed structures on the north-west direction. New undertakings for visitor facilities are proposed by means of a visitor facility plan; in which the main concern encompasses the reorganization of the entrance-exit and parking areas. Besides the displayed parts of the archaeological site are planned to be expanded as some parts of researched structures have been completed. All these undertakings should be concerned relating with the high amounts of visitor numbers as Ephesus is the most visited archaeological site at all. It is argued that problems with the excessive usage of the main ancient street and vandalizing of the ruins could have been prevented by restrictions on visitation and public, but this is not the actual goal of the archaeological activities.

Archaeological site of ancient city Pergamon including the Acropolis and the surroundings are displayed in a form of an open air museum. As the site encompasses a wider area, certain places are frequently visited than the others. An interrelated complex of historical zone referring to the old ottoman urban structures and archaeological site could be integrated into a network plan which was once intended to be proposed by United Nations National Park Services. This does not only provide to promote the local vicinity, but also protect the old urban complex by accentuating its importance. Social and economical dimensions of the contemporary site can also be widened by means of integrating the locality as an important factor into the development and management plan.

As a conclusion, archaeological landscape should be preserved and integrated within the heritage studies and presentation. Also;

- Replanting is conducted almost in every archaeological site, however a particular concept regarding with vegetation treatment lacks.
- Tourist facilities are of importance which should be conducted through a comprehensive planning concept.
- Presentation of sites should be based not only on the conservation of heritage through academic practises, but also visitor facilities. Yet, reconstructions are not desired.
- Archaeological sites should not be converted into a Disneypark. At the same time, sites should not be displayed in a museum-oriented concept.
- Despite of the fact that visitors cause deterioration for ancient ruins, the archaeological heritage should be accessible for everyman. Tourism and conservation are both inseparable.
- Management is important for future-oriented conservation, but the implementation is expensive and legislations constrain the attempts.

Table 4.4.3 Discourse "Landscape Design".
Story-line: Presentation of archaeological sites in terms of landscape features and visitor facilities.

Interview partners:	Hierapolis	Aphrodisias	Didyma	Priene	Miletos	Ephesus	Pergamon
Framing							
Presentation types and the goals	• Archaeological and natural site. • Cultural and natural resources are presented together.	• Park-like presentation including landscaping on site. • The landscape and archaeological situation provides for a cultural park.	• Monument presentation. • Archaeological network can be established through the linkage of sacred way between Didyma and Miletos.	• Open air museum to display the remains within the landscape. • Readable historical topography is the major goal.	• Purist approach to the presentation concept. • Interpretation of the site is not desired. • Imagination with fantasy and information is aimed at the site.	• Open air museum enriched with various reconstructions	• Open air museum with partially recons-truction.
Visitor facilities and infrastructure	• Entrance complex with information center, shops, Café, WC. • Museum is on site. • Car park is located within the archaeological area.	• Paved zone with café, shop and WC. • Museum is on site. • Car park is outside the site. Sitting facilities are provided in a replanted place. • Informative elements near the displayed buildings. • Visitor route on a new tracing.	• Vista point with information board. • Tourist facilities are insufficient.	• Natural and historical setting as visitor route. • Car park is located at the entrance. • Information boards are insufficient.	• Establishment of visitor route on the ancient tracing is in progress. • Information boards are designed to emphasize the general setting of the ancient city landscape. • Tourist facilities are insufficient.	• Entrance and car park is located on the archaeological area. • WC is on the site. • Concerts and festivals are organized at the amphitheatre.	• Information boards. • Panorama terraces. • Car park, shops and Café are at the entrance.
Uses of archaeological sites	• Health tourism and recreational (swimming, sightseeing) usage. • Economical income through accommodation.	• Archaeology. • Recreation. • Economical benefit has not been gained yet.	• Archaeology. • Sightseeing as secular holiday function. • The locals receive economic benefit of the archaeological site through catering and shopping.	• Archaeology. • Recreation. • There is little economical profit from the archaeological site.	• Archaeology. • Informative use. • A regional economic benefit from tourism can be mentioned.	• Archaeology. • Cultural activities as concerts at amphitheatre. • Religious use: Christ pilgrims visit the region. • Major income through historical resources, trade, accommodation	• Both recreational and didactic uses. • Economical benefit for the modern city of Bergama.

4.5 Typology of archaeological site presentation

By means of the results of empirical analysis, it is aimed to classify major presentation models for archaeological sites. Consequently, a typology of archaeological site presentation is developed to propose possible landscape design models on the archaeological sites. Figure 4.17 shows these specific presentation models distinguishing landscaping and management activities on sites. It is of essential importance that all the options may overlap as the goals of conservation, planning and management are interwoven. Moreover, other presentation models may be composed due to the dynamic cultural landscapes and constantly renewed land-use planning options.

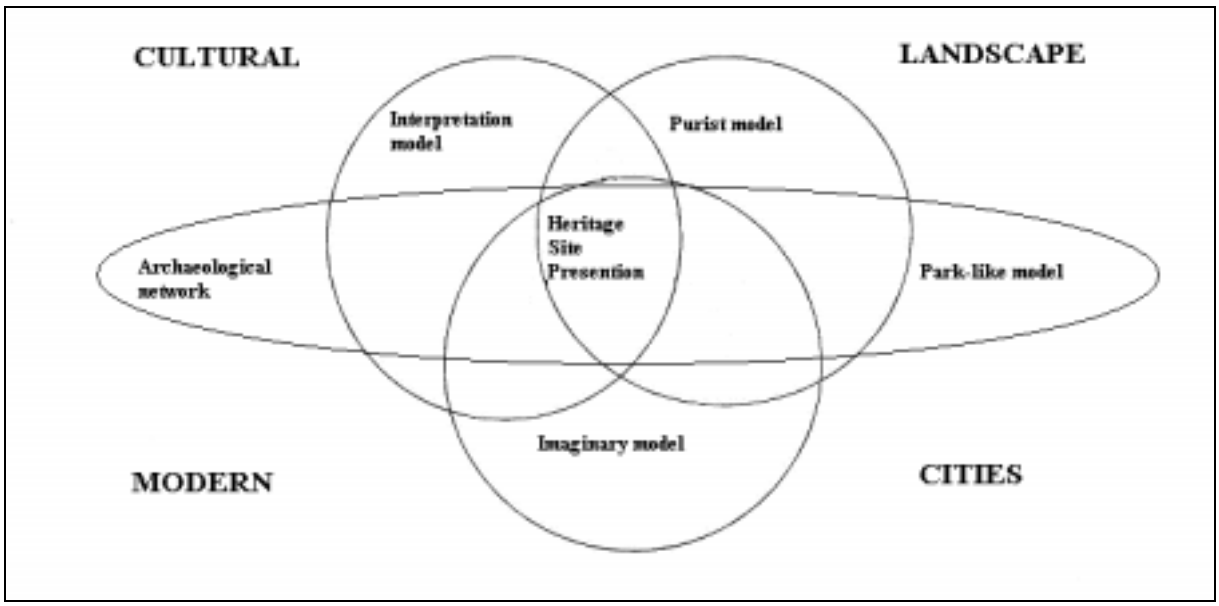

Figure 4.17 The integrated presentation models. They can be variable and flexible in describing the convenient model.

Presentation models point out different approaches toward archaeological landscapes. Regarding a multi-attitude approach toward environmental remains enhance the context and broaden object preservation to a spatial design. In defining the presentation models, there are no single accepted definitions, but considers that all sites have similarities, but at the same time they possess different aspects and features.

4.5.1 Interpretative model

Recreational parks and archaeological open air museums can be shown as typical examples of this model. Symbolizing a change in situ is a most effective way to communicate it (Lynch 1972: 95), as many environmental changes are in process but invisible. Archaeological sites are the indicators of past evidence as a means of dealing with all the issues affecting these generally complex sites. Lynch (1972: 119) stated that rhythms, objects, and events exist; but time and space are triumphant human inventions. Past, present, and future are created anew by each individual.

Interpretation on archaeological sites can be mainly presented at locations wherein the visible evidence of historical resource is insufficient. Hence, the understanding of the site

perceived by the visitor should be supported in terms of complimentary issues through interpretation of site. Interpretation is connected with the particular way in which something is understood, explained or performed. In this sense, it is concerned with the whole landscaping of the site which is of interest from a range of disciplines, and particularly the context of the presentation of artefacts associated within its landscape. At the archaeological site of Troy, the archaeological structures are insufficient for the tourist to perceive the ancient scenario. The legend of Troy and wooden horse, in turn, is well-known owing to books and media. The wooden horse at the entrance of the archaeological site provides a tangible structure for the visitor to associate the site with the intangible values (Figure 4.18). The landscaping including planting and pavement around the monument enhance the readability of the site.

Figure 4.18 The wooden horse at the archaeological site of Troy. It is situated in a park-like manner at the entrance of the site so that it gives a visual impression of the legend of the wooden horse and its association with the ancient city of Troy.

In the heritage tourism, it is often the way to emphasize the selected structures in its architectural and archaeological formation without establishing a connection with its location. In such a presentation, it is of importance to convey the values and qualities of the site. In order for something to be interpreted, and to be perceived as having meaning, an individual needs to be aware of it (Poria *et al.* 2003). Therefore, one objective is to make able to aware of the site and its characteristics. Considering this, a presentation concentrated on landscape features help to provide a basis and backdrop setting for an appropriate scenario. As the outcome variable depends on the open area surrounding the artefacts, patterns involving movable objects, different materials as a diversity of contemporary structures can be placed at design disposal. To identify the suitable design option in landscaping the historical area, it is of importance to investigate the current situation and the historical context. New design requires careful planning to blend with a particularly sensitive area of the setting of the heritage site. This includes the following options:

- Didactically editing in terms of picturing, means of media, panel, board etc.,
- Plan for an efficient circulation including trails running-leading to striking vista points and access (a deliberately planned entrance can assist introduction for drawing attention to a great extend and provide relationship of communal space and archaeological space referring to spatial continuity),
- Emphasizing natural resources and features in terms of historical, archaeological and architectural relevance,
- Tourist facilities and services: infrastructure services: parking lots, lavatories, shopping centre, post, café, resting points, museum, and information centre etc.,
- Feasible planting and vegetation control: difficult design problem due to excessive weather conditions.

Figure 4.19 The medieval courtyard has been partially reconstructed to a garden in Bodrum Castle. The new garden enriches the visual quality of the heritage as an attraction, provides sitting places with shadow and serves for display of the archaeological findings.

The reconstructed garden at Bodrum Castle is a fantasy medieval garden with contemporary planting patterns in a historical environment. Besides its high appeal factor, the garden provides pleasant place to relax for the visitors (Figure 4.19).

The options of using new material and new forms at archaeological site design have always led to discussions between related disciplines at archaeological sites. In what extend is it possible to integrate contemporary forms to the historical ensemble? In many cases, the information of ancient townscape features is limited to the streets and pavements excavated on the site. The more damaged or fragmented they have become, the more problems arise from conflicting interests. In this respect, a reconstruction can not be the solution as the information lacks. In some cases a sensitive redesign seems to be more honest and effective than an unreflecting reconstruction.

Considering the protection shelters in new forms and contemporary materials which, in many cases, do not relate with the visual features of the site and ignore the archaeological

landscape, usage of contemporary material can be implemented in case. However, when the visible components of the site do not exist, proportions, perspective, size and scale of the site can not establish a spatial formation, thus partial reconstruction of ancient structures on site can help to present a fairly accurate scene of ancient setting. The aim of the presentation is recreation-oriented offering tourist facilities with different attractions. Regarding to the conservation measures, reconstructions often serve to the public interest rather than scientific interest. However, the didactical value of the interpretation is always in existence.

A basic simplifying division of resources is the distinction between "*primary*", i.e. resources which attract visitors and are the principal motive for the visit, and "*secondary*", i.e. resources which support visitors during their stay (Ashworth & Tunbridge 1990: 58). In this respect, infrastructure and tourist facilities as well as re-planting on sites can be recognized as so-called support services. Planting, apart from the natural vegetation at sites, should be considered as a complementary option in presenting the archaeological resources. Despite the variety of possible design patterns through various plant species, the "strict and conservative" landscape design which is against the idea of park-like embellishment (Papageorgiou-Venetas 1991: 36) seems to represent the antique structure and genius loci of the site the best. As an example, the ancient-origin plant species can be displayed whereby the natural vegetation can be retained as well.

The pressure of visitors has led to some new approaches and consequently strategies in archaeological site presentation. The reconstructions or "defensive replications" (Ashworth & Tunbridge 2000: 189-190) has occurred where the intensity of the heritage demand threatens to damage the historic resource itself. The pressure of visitors is relieved by offering an interpretation which is a more complete and therefore realistic reconstruction of the past than the actual historic artefact. Visitor centres providing various facilities have in the recent years become one of the popular solutions to the problem of visitor pressure.

The question of creating the ancient topography by planting was mentioned in the preceding chapters. The restorations of built material as the main representative aspect of that ancient culture can not give the impression of the whole understanding of a setting which is a common case in public presentation. Vegetation, in fact, as an ancillary source has an essential effect on presenting the archaeological setting. Yet the information of ancient planting and gardening patterns are still quiet inadequate, but the landscape still remains essential hints of past. Additional, the existing material from ancient literature, paintings and plastics can broaden the interpretation.

The ecological interpretation of plant remains tends to be delegated, but not their placing in the sequence (Vita-Finzi 1978: 113). There can be valuable clues to former ground conditions and vegetation patterns. In the vicinity of archaeological sites, the presence of native vegetation indicates evidences for the plant cover and environmental requirements in the ancient times. Likewise, the traditional agricultural and planting patterns can be useful in interpreting the landscape design on sites. History-based planting approach can enable the site to provide "imaginary", but effective physical scenery, an interpretation combined with contemporary influences. This in turn would not, by all

means, destroy the originality of the site, as the remained structures have also lost its real context.

As a summary, interpretative model can be considered, in its extreme term, as a concept of a culture and entertainment complex composed of appropriate facilities performed in its original historical ensemble. However, it should remain the intrinsic values, with an orientation toward the authenticity as much as possible.

4.5.2 Purist model

Purist approached design model is used to mean the characteristics attributed when the excavated site is preserved after excavation activities through essential fundamental preservation measures. Chippindale *et al.* (1990: 9) call it straightforward site that is one item in a compound of powerful ingredients: archaeology, landscape history, scholarship, knowledge (rational, intuitive), preservation, and presentation. These sites are aimed to be appreciated for their cultural and educational benefits. Although they serve primarily for the research, in reality, archaeological sites almost always have multiple objectives. The result is that often the various activities take place at the landscape. Sometimes the underlying features are harmonized by latent structures, such as re-planting or organizing pathways through minimum interventions. Due to the priority of conservation measures, the recreational interest is generally drawn upon to a second degree, yet the public interest should be of importance in defining the planning principles. In the light of these issues, the conservation of outstanding significance of these archaeological sites; namely its natural plastic and rich landscape quality, and the cultural features is a prerequisite, in addition the surrounding landscape.

Taking into account the widespread variation of the landscape character across the site and the varying issues, there are still common threads that apply across the whole of the site. It is important to provide tourist facilities to meet changing visitor needs and expectations. Here, the most complex issue is the management of the landscape in retaining and enhancing of those features which are of significance and at the same time accommodating the living and lived-in nature of the landscape.

Another type of purist presentation is to preserve and open for the public in its initial state before the excavations destroys the romantic ruin landscape. The archaeological site of *Alinda* (Figure 4.20) is a case in point due to its natural state including rich historical and natural resources. *Alinda,* in its current state, epitomizes the natural archaeological landscape shaped by anthropogenic but mostly natural forces. It reflects the relict landscape that the evolution process has shaped the historical and natural forms and components and continues its progress. At the same time it exhibits significant material evidence of its evolution over time. It represents a harmonious interrelationship between nature and culture. The vegetation cover over the extant remains of the ancient city indicates also this evolution process, as the hills are almost covered with olive trees and other maquis scrubs. Hence, the site is not rich in plant species, but a particular ecology for its own has evolved over time. The outstanding landscape aesthetic qualities lie in the integrity and authenticity of the remains and the untouched setting.

Figure 4.20 Ancient marketplace of the archaeological site of Alinda. The site epitomises the untouched nature of an ancient site.

Alinda indicates characteristics of a natural-archaeological park, in which the site provides a wide scope of facilities regarding recreational as well as didactical activities through the ecological and topographical features.

4.5.3 Imaginary model

It is a term used for implementing the minimum necessary excavation and preservation activities at sites. Heritage preservation, more generally, is described as the process used to preserve historic sites that are in a “ruined” condition. The ultimate goal of this type of ruin stabilization is to preserve for future public and professional education and appreciation (Jameson 2004: 235). Tourist facilities such as information centre, footpaths and information boards allowing appropriate accessibility are simple but effective issues to provide the spatial arrangement. In addition to the low level of maintenance, it allows sites to be left relatively unaltered and available for further investigations in the future. There is always considerable room for improvement in some areas, particularly facilities information provision, catering such as refreshments and toilets. But at many sites, these facilities are less than satisfactory. Considering the imaginary character of archaeological sites, the existing resources on site should make impressions about the ruins of setting and its environment, however the lack of visible artefacts restrict the perception of spatial continuity. Moreover, due to the open and unprotected environment, burials and visible remains can be threatened by erosion, wind and other environmental impacts. Ruins have achieved a certain value in themselves, but the romantic picturesque is not the original appearance of the ancient building.

Alternatively, planting can be chosen as a method to define the archaeological artefacts vanished, in which the character of the historical environment retains. In this regard, it is most likely to use the existing plant species, as well as the plant species of

antique origin which can be find out through landscape archaeology and archaeo-botanical researches at site. By means of external options, it is also possible to create a segment of ancient times for the visitors. Establishing a botanical garden, in which plant species of particular themes can provide attraction through natural qualities. As an example, gardens displaying medical herbs or economic plants of ancient times enable visitors to envisage the past as well as to provide information about botany and ecology.

Archaeological site furniture (outdoor furniture) supporting the landscape design, such as seats, waste boxes, shelters protecting from weather such as shady spots-bower, vista terraces and ground surface covering has to be chosen referring to the harmonious design approach. In an imaginary landscaping model, it may be more likely to choose a site-orientated design structure. In other words, the more harmony in landscape design, the more authentic is the site perceived.

4.5.4 Archaeological network model

It intends to establish tangible and intangible connections in a regional scale. The aim of such a network is not only to maintain a regional archaeological preservation concept, but also to enhance the landscape and provide development for the rural areas interrelated. The open spaces between archaeological sites constituting rural settlements, and the existing patterns of fields, woodlands and open country as well as buildings reinforce the patterns of the landscape. Moreover, the development of natural habitats between sites is a vital component of any landscape strategy. As the area between the designated sites changes in character, the exploitation can also be enriched in many ways. In a sense, it allows to use the resources more flexible, in which some facilities can be realized outside of the preserved areas but still in connection.

A broader approach to this aspect is the heritage route.[30] It is composed of cultural elements whose significance comes from exchanges and a multi-dimensional dialogue, countries or regions, and that illustrate the interaction of movement, along the route, in space and time.

Archaeological routes encompass many landscape features and freestanding materials still evident in natural or excavated states. Selected suitable routes and trails meeting the needs of both pedestrian way as well as motor vehicle can link the archaeological and landscape features with each other. The routes can be divided into districts including car park so that the access to the specific landmarks on the routes are accessible for the public. But the aim is to encourage people to travel into and around the area on foot. Several reconstructed structures and planting patterns enable the route to make attractive and purposive points in the visitation. Additionally, they provide utmost recreation facilities within the historical-cultural landscapes that can vary from wandering to cycling.

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[30] In the UNESCO Conference “Routes as Cultural Heritage” in Madrid 1994, it was discussed that the historical routes should be considered as cultural heritage as they have left material and spiritual marks of their habitat or passing. The exchange of ideas, knowledge, religious and belief have extended their domain in the region. Monuments, archaeological remains, historic towns and cultural landscapes are components emerging from this cultural richness and variety of both the relationships and cultural properties that may exist in a cultural route.

The Hadrian's Wall Path National Trail in England is a case in point. The trail combines the whole heritage site within various landscape features. Once considered as an archaeological resource tracing a line across the country has been transformed in a few decades into a complex, layered cultural landscape rich in both heritage and contemporary values (Mason *et al.* 2003: 37). In doing so, Hadrian's Wall became a cultural landscape in stead of remaining as a discrete monument in which the setting of the heritage is perfectly integrated to the management plan.

4.5.5 Park-like presentation model

Park-like presentation is apt to be used in the urban areas, where historical monuments and archaeological ruins exist in situ, thus are integrated to the public places within the city zones. In this way, historical places combined with public usage not only enrich the visual and cultural quality of open urban spaces, but also enable to preserve the historical fabric of the urban landscape. It aims an integrated conservation concept concerning the aspects of tourism, education and visitor facilities. Above all, excessive usage of the space can also damage the archaeological assets. However, such usages of historic structures give some impression about how the spatial design of the cities were evolved and survived. Such spaces consist of integral spaces for rest and leisure set in a new approach.

In some cases, wherein the fabric is fragile and need to be preserved, the public place can be spatially separated from the historical structure with charged for admission. Red Hall, remains of Hellenistic/Roman temple vicinity in the urban fabric of Bergama is a case in point (Figure 4.21) (see Chapter 6, p.140-150). The archaeological site is displayed within a public urban park including tourist facilities such as toilette and seats, yet the entrance of the archaeological heritage is charged. In this respect, the display of archaeological heritage has established an interrelated usage of recreation and conservation through a park concept, which epitomises modern design principles. Thus the new materials are likely preferred in park design and public access to the archaeological heritage is across the park.

Figure 4.21 The “Red Hall” Roman temple in Bergama. The archaeological site is embellished with a park-like environment.

Another possibility of integrating heritage to the physical setting of the urban fabric is using it as a component of the open public space. It presents itself mostly in medium sized towns and large cities. The site of Roman bath remains in Frankfurt is a case in point (Figure 4.22). The remains are displayed in a park-like space, a kind of pocket-park between buildings of the modern urban fabric. In this respect, it is not a prerequisite to present the historical heritage in a historic urban fabric, but rather in a coherent physical setting with precise details and sensuous forms.

In general, when the historic urban fabric is rich in quality and quantity, the implementations of infrastructures should be evaluated in an integrated heritage system (framework). Moreover, urban archaeological heritage presentation should be deliberately evaluated within the urban landscape.

The archaeological excavation areas within the urban spaces such as Athens or Rome faces with other problems, as the entire historical area compromises an essential part of the urban structure and historical resource. Designated areas, in which the excavations has not carried through or completely ended, constitute the vacant plots of urban fabric, unless they are not presented. In this respect, regarding the remaining historical heritage, the strategy of infilling vacant lots with greenery seems to be optimal for preserving the historical urban fabric. Contemplation of landscaping the excavation areas as safeguarding the heritage in the rural areas has been aforementioned before, in which the rising demand for space for leisure seems likely to continue. Green belts as historical areas in the urban landscape tend to increase in an accepted way. It may be considered as a result of a relation of increased social consciousness of preserving heritage and the ecology.

Figure 4.22 The remains of Roman bath in Frankfurt am Main. The area is integrated into the urban landscape through contemporary design concept.

Figure 4.23 Vienna - Alte Hofburg in the center of the Michaelerplatz; the ruins of Roman and early medieval structures excavated in 1990-1991 are presented in a large circular opening designed by Architect Hans Hollein in 1992. A wall framed with stainless steel cladding offers a view of the historical objects beneath square.

In the historical centre of Vienna, World Heritage City since 2001, the archaeological findings from roman and medieval periods are perfectly integrated to the historical square, Michaelerplatz, of the historic city. The contemporary design concept with modern materials enables the historical structures to display in the historic urban landscape and enhance the quality of the square (Wehdorn 2004: 67) (Figure 4.23).

Summary

This chapter demonstrates the empirical study of the dissertation and addresses the specific aspects of archaeological activities, landscaping and presentation on sites. The questionnaire - based interviews were carried out with excavation directors and museum directors at the archaeological sites on the west Aegean part of Turkey.

In order to analyse the archaeological sites by means of available research data, the principals of discourse method were chosen. The results reveal two key view points. The first view shows broad approach towards landscaping and recreational activities at archaeological sites, and the second one specifies characteristics and accordingly prototypes of current state of sites in terms of presentation and tourist facilities.

The planning disciplines rarely involve into the archaeological activities and the management approach has not been properly integrated yet. However, the visual aspects of landscape, to a great extent, are taken into consideration. Yet planting is still considered as a secondary aspect, mostly used as a supplementary element for enhancing the aesthetic qualities of the ruins. It is recognised that ecological and environmental impacts and improvements in the surroundings of archaeological sites should be also taken into consideration.

The interview partners agree on the importance of aesthetical assets and deliberate presentation of the site for the public. Nevertheless, they maintain that excessive usage damages the ancient structures in an irreparable way. Natural processes such as landslip, fluvial and coastal erosion, rarely cause major damage and loss. Burrowing animals, tree roots and invasive vegetation are the common faced problems damaging the ruins on a lesser scale.

In many archaeological areas, it is still a common situation that conservation professionals tend to condemn the amenity aspect within physical site planning and appropriate design techniques. As a consequence they intend to neglect this issue, regardless of the growing visitor interest, leisure demands and tourism factor. Rarely is there a scientific team developing a holistic approach for heritage sites. As a result, visitor facilities remain inadequate, the conservation of heritage feature is not ensured, and the quality of experience and appreciation of site by visitors is not sufficient.

The presentation typology intends to point out possible design options on sites relating with its contemporary character, historical usage and development to establish management options and planning policies. Under the light of this analysis, five presentation models are presented to classify the sites regarding their spatial, archaeological and topographical qualities. In doing so, it is aimed to find out approaches towards landscaping and presentation at archaeological sites and to focus on different perspectives of heritage usage.

5 THEORITICAL LANDSCAPE DESIGN and PRESENTATION PRINCIPLES FOR ARCHAEOLOGICAL SITES

5.1 Landscape design on archaeological sites

Heritage site presentation is considered as the interpretation of cultural resources within its related landscape, making it accessible by means of heritage conservation and landscape planning. In this study, presentation implies the spatial and physical organization by principals of landscape architecture integrating into the conservation measures. Integrated planning concept indicates to a long-termed archaeological resource development within its working landscape. The historical forms play a key role in determining the image of a landscape. Hence, the archaeological sites not only directly influence the physical scenery, but also reinforce the development of a region in terms of social, ecological and cultural aspects. For this reason, archaeological sites are considered as an open space system requiring spatial organization and landscape planning concept.

Landscape design is a means of promoting the heritage conservation. It not only helps keeping visitors on designated routes in order to prevent serious damage on the protected areas but also enables the visitor to tell the story of site, making the site legible. In this chapter, it is endeavored to present a comprehensive overview of the problems related to the planning and presentation of heritage.

Presentation at archaeological sites is a complicated theme. It addresses many issues that had not been previously anticipated or fully understood. In recent years, it was realized that the archaeological activities are not sufficient to display the sites in their contemporary state for the public. After this time, the interest has been drawn partially to ascertain appropriate presentation in which the landscape is intrinsically included. Accordingly, questions came to the debate among different groups of professions, referring to conservation and interpretation such as “which values should be preferred in presenting the heritage and which values can be ignored?”. Another question posed was „should we preserve the present context within its landscape or should we intend to interpret it in the way that it could have looked like in the ancient times?”.

Papageorgiou-Venetas (1988, 1991) concentrates on the archaeological site landscaping of Athens which is a detailed and challenging task combining urban planning aspects with landscape architecture in the modern metropolitan. According to him, it is still a quiet controversial issue in which no consensus has been reached so far. Furthermore, there has been a lack of landscape interest and understanding in the archaeology, which neglected the landscape as a component of scenery. The integration of the ruins into the environment has begun by the development of the tourist industry, whose demands and interest are diverged from scientific to popular options. In fact, interdisciplinary collaboration in environmental design including urban planning as well as landscape architecture was not much concerned with archaeological heritage as a direct or indirect design material so far.

In this sense, the landscaping options range from ignored situations – natural state – over a “suggestive landscape design” corresponding to interpretation of the historic site, and finally a conservative landscaping which attempts to reintroduce the planting patterns of antiquity. In this respect, landscape design at archaeological sites should focus on the following:

- Heritage preservation,
- Archaeological landscape preservation,
- Usage of the heritage,
- Tourism intensity and usage capacity of the site,
- Design and planning aspects; site organization and infrastructure.

In landscape design and presentation of archaeological sites, presentation approach is of essential importance. One approach is the archaeological material presentation, namely the display of remains through conservation process. Second approach is the archaeological landscape considering it as an entirety. Sivan (1997: 52) discusses the presentation of the archaeological sites within the conservation concept. After evaluating the values and qualities, decisions should be made about the message that should be conveyed, the story should be told and the methods that will best allow this to be achieved. Interpretation should aim to communicate with the visitor. At the same time, it should enhance the quality of the heritage. Indeed the presentation is directed at more than one level of visitors, consequently the story told by interpretation should not overwhelm the visitor with specific or redundant detail; otherwise it may impact the visual and informative qualities leading to sending visitors away with a sense of disgruntlement and dissatisfaction.

In order to define the design principals at archaeological sites, one should consider the aspects such as location, number of visitors, social and economic aspects, as well as local and regional interests affecting decision-making measures. This requires integrating the archaeological heritage into the modern environment and the contemporary usages, so that heritage preservation contributes to the quality of a region or a city and shapes the future-orientated development. There are some factors affecting the quality of heritage sites relating with the visitor interest. One of them concerns with the time factor which visitor spends at the site. It is important to provide more efficient time to observe and comprehend these complex sites.

Secondly, the visual qualities of the site should be taken into consideration. Generally visitors, coming to visit such places, have already been informed about the outstanding monuments and landscapes through media, books and photos. As an example, Troy is one of the famous ancient cities of the world; its reputation has not emerged from the outstanding remains in situ but from its symbolic values such as legends, history and the excavation story. However, visitors coming with high expectations leave Troy with a sense of disappointment, a loss of sympathy towards archaeology due to the unreadable features of the ancient site.

In this respect, it is of importance to emphasize the sense of the place. For this, three key concepts should be taken into consideration:

- To define the physical setting,
- To give information of the site: historical and scientific information (archaeological and architectural features) with a specific story including the relation between site and its environment,
- To keep the interest of the visitor during the whole visitation; at some points, resting and catering facilities can be offered.

The landscape characteristics indicate the development of the heritage whereas the archaeological heritage conveys the attributed values of the past through the tangible remains. The visible remains enable the visitor to experience these values in a re-established physical setting. The “invisible” parts of the site; remains those haven’t been explored or conserved yet, but their existence have been identified through some indicators are also included to the archaeological site as well as the visible remains and non archaeological parts regarding tourist facilities. The state of the historical background and the present landscape provides for a critical discussion of priorities for conservation and presentation. How far, for example, should planner go to preserve the existing landscape? Should it be re-established as it looked thousand years ago? Or should one let nature take its own course of evolution? And consequently what values and assumptions should be imposed on the monument regarding the changes in the society? It is a fact that the survival of the archaeological remains is contingent on the socially-defined values assigned to those spaces (Darvill 1997: 79).

Preserved built environments should be involved in the contemporary activities. Lynch (1972) discusses the contemporary utility of the historical environments in his book „What time is this place?”. He maintains that despite the discretely provided utilities and activities, the usage can rupture the sense of historical integrity. Yet, strict preservation is not the only solution to preserve the history, as the process of decay is only slowed down but not stopped. Besides, the excavation activities reflect pure intellectual view, aiming to search about the past and preserve it.

According to Lynch (Banerjee 1990: 37) creating the past is a process of selection which ultimately makes it part of the living present. Designing the environments rich in historical components, the existing structures supply both advantages and disadvantages, and often dominate the landscape. At archaeological sites, there is a precise sculptural relationship which provides exact visual control, and greatness in spatial effects. In addition, the accidental background permits solutions that are rich in form and full of contrast .The difficulty arises when the old environment is intended to be combined with modern structures which lead to a dissonance in spatial and visual continuity. The old environment, however, is seen as an opportunity for dramatic enhancement, and so it becomes richer than it was. This is not preservation, or even simple addition, but a particular use of old and new. It is the matter of interwoven features between the new society and the old setting. The relation between monuments and the landscape are also relied upon it.

Certainly, it is more complicated to preserve and present the total setting of an archaeological site than material, yet it can be simplified through selecting the preserved structures by means of presentation and perception. Lynch (Banerjee 1990: 37) adds that we should expect to see conflicting views of the past, based on the conflicting values of the present. This requires creative and skilful new design as well as planning of the conservation measures. In some cases, a sensitive redesign seems to be more honest and effective than an unreflecting reconstruction.

In the preceding chapters, it was mentioned that achieving the balance between conservation and tourist facilities are of great importance. Aplin (2002: 63) maintains that it is difficult to strike the right between attracting visitor and catering for visitor, on the one hand, and making sure reasonable capacities are not exceeded, on the other. Pressures on places lead to taking new measures; however the fact is that historic places and archaeological sites are inevitably part of a wider network of tourism places. The fact that tourism potentially challenges archaeological sites is now broadly recognized. This has resulted in a far more cautious attitude towards the display of remains. Programs for visitors have been recently involved in the concepts of archaeological activities. In this stage archaeologist rather focus on the archaeological material. Indeed, more attention has to be paid on the landscapes upon which the plans are placed (Rodiek 2003: 2).

Many ancient cities have long ago become isolated sites and lost their context they once had within a wider social and ecological system. However, many archaeological sites continue to influence contemporary activities as well as enhance the texture and character of the modern landscape (Barker & Darvill 1997: 79). Archaeological landscapes still have a high degree of authenticity in its components. According to Barker it is often assumed that the normal state for a landscape, as indeed for society generally, is a stable one which is more or less constant within certain bounds. There is also a considerable significance in the relationship of the site components to the landscape of which they are included. Furthermore, the archaeological settings can contain various habitat and species that are of national and international significance. So the dominant structure is the historic landscape which is perceived as a whole and the ruins belong to this scenery. The presentation, in that case, should demonstrate ancient ruins as part of the landscape and not as a monument of its own. In general, the impression given to that landscape is the sense of isolation and mystery, but in some cases, due to the mass number of visitors and the traffic around the site, the sounds and the sights of modern life intrude on the presented area.

The same factors not only have contributed to the survival of the archaeological remains but also to the preservation of high natural values. In England, within the management site of Hadrian's Wall World Heritage Site (Austen & Young 2002: 30), seven key habitat sites have been identified which have very characteristic plant and animal communities of international importance. It holds several naturally nutrient-rich loughs, which are internationally significant for their wetland nature conservation interest.

According to Barker & Darvill (1997: 74), the physical manifestation of landscapes rich in archaeology, and well researched in terms of their environment, means that now and again the past can almost be conjured up from the ground and brought to life. These are the "historic environments" whether landscaped and displayed in a spatial setting or free standing in the landscape, they both affect the human activities and shape the landscapes. Treating historical landscapes and their settings can involve various activities. While the reconstruction of cultural material can establish a staged authenticity, landscaping the site can help to reconstruct the historical environment. Ancient cultures occupied territories and regions which had integrity, structure and symbolic meaning. This indicates the difference between the space as landscape and the place as the archaeological setting.

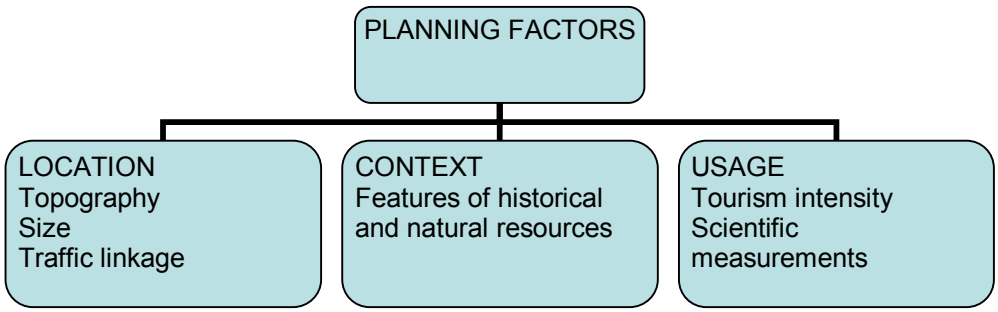

Figure 5.1 Factors for planning heritage sites.

Figure 5.1 shows the factors revealed in the planning activities. Factors defining the outline of the planning principles are:

- Location (Topography, size of the area, traffic connection etc.),
- Context (visual, historical and ecological features of cultural and natural resources),
- Usage (tourism intensity, archaeological excavations and preservation measurements).

An example: Landscaping at Acropolis, Athens

The landscape planning of archaeological sites has been applied to Acropolis in Athens. The first activity at Acropolis was the planting of the archaeological site in Athens between the years 1953-1958 by the American landscape architect Ralph E. Griswold (1953-1955). His task was to plant native trees and bushes as well as to repair the existing vegetation cover around the Acropolis (Schmidt 1993: 224). Griswold[31] has stated in 1958 after he accomplished the replanting of the Athenian Agora (Valentien *et al.* 1997: 111):

[31] Landscape Architecture Pioneering in Greece. Problems encountered in replanting the Athenian Agora. In: Landscape Architecture, Boston, Vol.: XLIX, April 1957, 391-397.

> "In the process of my work the questions that constantly came to my mind were; what will this pioneer enterprise contribute to the Landscape Architecture beyond the addition of another interesting project? Will there be any attempt to landscape other archaeological areas in Greece as well as in other countries? Will there ever be a scholar in ancient history of landscape art who can do the kind of research that Prof. R. E. Wycherly of the University of North Wales did for the Athenian Agora. I like to think that the answer to all three questions is "Yes"."

> "I like to dream of the time when there will be landscape scholars who can take their place among other scholars in historical research. …But it is an enticing, unexplored opportunity for anyone with sufficient intellectual curiosity to dedicate himself to such a career."

Yet the Greek architect Dimitris Pikionis´s (1889-1966) work on landscaping the archaeological site has remained as a pioneering and unique task integrating landscape architecture into archaeology. Pikionis worked on land use and archaeological site landscaping of the Acropolis in Athens between the years 1955-1958 with progressive, traditionalist and aesthetic ideals. He combined the aesthetic values associated with early landscape architects with a sophisticated understanding of natural system and landscape features. Pikionis´s work was based on the designing of open spaces in the area providing appropriate access and circulation for visitors on site. He planned a network of tracks paved with natural and ancient stones and built new structures such as stairs, sitting corners and café.[32] Pikionis preferred sparse vegetation regarding native and ancient-origin trees and shrubs as he was against the park-like embellishment. Although he designed only about 8 ha from the total area of 35 ha, his work influenced the whole archaeological landscape. He could combine the ancient setting in its natural state with new structures without disturbing the genius loci of the place (Figure 5.2 and Figure 5.3). His accomplishment can be summarized as the following (Papageorgiou-Venetas 1991; Economakis–Brunner 1992):

- He paid attention to the new uses and function of archaeological sites, namely the tourist use and the representative function of the ruins.
- He designed the site with careful and inconspicuous design patterns for contemporary structures through harmony of form, material and texture (natural stone, wood) with the integral landscape, ancient architecture and traditions.
- He paid attention that the contemporary structures did not compete with the ancient structures and they were integrated into the ancient topography.
- He chose specific vantage points which ensured optimal views between monuments and the whole Acropolis.

[32] The congenial landscape design was based on a relatively small numbers of design elements. The main task, namely the tracing of the intricate system of a main access roads and secondary paths-all done in natural stone pavement often enriched by interconnecting concrete slabs-was elaborated in situ. A system with geometrical traces forms different important vantage points of the processional sequence. Two main loops create a progressive visual discovery of the monuments through an alternation of successive unexpected vistas. Carefully designed observation terraces offer unique global views. A pavilion in the vicinity-environs of the chapel creates a kind of precinct around an open courtyard. Visible marble stone work, wooden roofs and pergolas, light wooden porticos, develop the eternal themes of Greek architecture (Papageorgiou-Venetas 1991: 36).

Figure 5.2 Design details at Acropolis in Athens by Dimitris Pikionis (1889-1966) (Courtesy of Lehrstuhl Landschaftsarchitektur und Entwerfen, TUM 1997).

Figure 5.3 Detail from Cafe House at Acropolis by Dimitris Pikionis (1889-1966) (Courtesy of Lehrstuhl Landschaftsarchitektur und Entwerfen, TUM 1997).

5.2 Goals of landscape design and presentation

There is a need for such a study to deepen the understanding of how the present character of the site relates with its historic usage and contemporary development to define the management options and planning policies. The following goals approach to a clear vision as a whole in terms of conservation, recreation and heritage management:

- To provide sustainable environment for the sake of scientific researches (archaeology, architecture, art history etc.),
- To preserve the landscape character, landscape ecology, and to ensure the sustainability of natural resources,
- To generate informal education through didactical information,
- To support development of economic growth through tourist activities,
- To create leisure environments,
- To ensure and support the protection of heritage in terms of visual and functional aspects,

- To elaborate the cultural identity,
- To enhance the countryside or townscape through heritage attractions,
- To guarantee the preservation of historical resources,
- To retain the aesthetical and historical values as well as qualities of authenticity at sites,
- To develop a network of historical site system in order to establish a connection between spatial attributes and to constitute a unity in history pattern of a region,
- To organize the site in order to make it accessible for the public,
- To display the artefacts in its context,
- To stress the meaning of the artefacts and to make them perceived and comprehensible for public through experiencing by means of senses such as looking, touching, feeling, and hearing.[33]

5.3 Significance of visual aspects in landscape design and presentation

Landscape design and presentation should provide sensuous forms in which the visual character of the site should be enhanced. The concept of good design can be ascertained as having high functional and aesthetic merit but there are many solutions meeting of these standards. Alternatively, good design can be called, which is most eminently sensitive to behavioural needs. In historical places, the behavioural needs are related with the conservation and presentation aspects. When conservation based criteria meets with a sensuous oriented anticipation in planning, then it is likely to prevent problems that can arise when expectations about a plan conflict with reality.

Archaeological sites are places of special interest. They are constructed landscapes, in which its virtue exists through its being perceived, experienced, and contextualized by people (Ashmore & Knapp 1999: 1). The relationship between archaeology as past discourse and archaeology as contemporary practice inspires alternative interpretive constructions. The afterlife of monuments takes place in the contemporary landscape. Even the subtle constructions can transform the visual character of the place as well as the meaning of the structure.

The current situation of the archaeological sites can be defined as re-inscribing the past meaning onto a present landscape. In this respect, two important design options are to be envisaged; the first one is establishing an absolute harmony in the spatial and physical surrounding and the other one is establishing contrast effects.

[33] Schmidt (1993: 43) writes that it is complicated to establish a connection between complex structure and context of historical sites due to little groups of remains of unearthed structures.

The term of harmony is defined in Oxford Learner´s Advanced Dictionary (Wehmeier 2002: 589) as pleasing combination of related things, and adaptation. In terms of sensuous qualities, issues deliberately integrated to the planning options, as aforementioned definition of this option are of major importance in the decision of presentation and design concept which helps the alignment of archaeological and natural components as well as the new structures at archaeological landscape sites.

The interpretation of archaeological sites is mainly based on its imaginary character in which the nature of meaningfully constituted landscapes and the formal expression of constructed site exist. An ideal archaeological landscape comprises imaginative, emotional and symbolic values and qualities. The physical and verbal (re)constructions invoke assumptions about a particular site which the site physically, visually and ideally bears (Ashmore & Knapp 1999: 11). It can be considered as a memory which stresses the continuity in the landscape.

Confrontations with the unfamiliar may generate stress (Rutledge 1981: 88). Certainly, design strategy with a new understanding of historical sites is not likely to receive at once appreciation.

By all means, diversity is not a matter of mixing together a large number of varied sensations but rather constructing consistent, accessible sub environments of distinct and contrasting character to the environment. Once a readable space is established, it has a strong emotional impact on the observer (Lynch 1971: 192). Making decision for the form of a new protection shelter, the character of the physical setting and historical landscape is as crucial as the archaeological remain protected in addition to the usage of the structure The variety created by the new forms can also be responsible for the competition between modern and archaeological structures. The spectrum of possible design patterns can be enlarged as the usage of the structure enables new forms.

Existing plant cover and replanting provide sensuous effects enhancing the historical forms in the landscape. Vegetation is an important component of the physical environment. Existence of vegetation at sites has generally been considered as a threat for the archaeological remains and excavation areas. The fact that removed vegetation is in many cases not substituted with appropriate planting, as a result that the landscape character of the site can not be continued and enhanced. Furthermore, problems such as soil erosion, disturbance of ecology can lead to the disturbance of archaeological as well as natural resources. A strategic vegetation management should therefore be requisite for a good design.

The visual harmony at archaeological settings between components of site and its surrounding is embodied by the physical and aesthetical adaptation of material, texture, colour etc. The movable parts of contemporary built structures have a high visibility in the archaeological landscape. Hence, they are inter-visible with heritage structures in which they have to be distinguished in the present character of the site through design strategies.

In this respect, attention has to be paid to regulating important views without distorting the meaning of the site. This selective method can also restore the inharmonious views. Topographic variation of the landscape create extensive views which the site features can be visible from a considerable distance.

Regarding the visual, structural and functional relations between the presented site and its surrounding landscape, the undertakings on sites require exceedingly design patterns and deliberate plan concepts. The environmental establishments as well as protection measurements involving restorations, constructions or visitor facilities can critically change the appearance of landscape as well as the context of the site. To set out contrasts through design with material, texture, colour etc. is often the way of presentation at sites. The new shelter construction for Terrace Slope Houses in Ephesus is a good example. The preservation and ultimately the presentation of this unique building complex should provide the best conditions as favourable as possible to preserve the archaeological and architectural elements. According to the report of Austrian excavation team, the planning of such a protective structure, the ruins themselves – the building materials once used here, the situation in the landscape, and the influence of the environment – were decisive. Furthermore, the protective structure should fit in to the environmental landscape of Ephesus through its simplified form, and presents no visual competition to the excavations. However, the roofing of the shelter is immediately caught by the eye at the beginning of the main street (Curetes Street), and as a consequence the shelter is a real eye-catching element and yet competes with the adjacent ancient monuments and remains.

The scope of this problematic can be widened in terms of material, form, structure or colour of new structure. In addition, in the decision making it can be discussed questioning to what extend the landscape was valued and according to which criteria the fitting of the building to the landscape were initially decisive. With all these remarks, the design objectives seem to ignore the landscape features which a known phenomenon at sites. However, as the landscapes are not static, neither are interpretations and understandings of it.

5.4 Design elements at heritage sites

5.4.1 Site organization and routing network

In designing outdoor recreations, site organization is of essential importance as a result of intense usage and the need for conservation. The site planning is an important contribution to the presentation of the archaeological site as the accessibility to the site brings new activities which can threaten the existing pattern. Site organization includes access, exit and parking, and pathways linking the archaeological remains. In a broader sense, organizing appropriate space for visitation in a visual sequence tolerate people to act freely at archaeological site. In other words, it is concerned with the quality of human experience in the open space.

Vantage points, vista terraces, routing network are of importance in an open space to establish an optimal circulation system and spatial organization connected with the presentation of archaeological artifacts. Connection of an established space and the quality of presented structure remain an important criterion for an appropriate presentation. Above all, these options enable visitor to experience the site with its varying features from different aspects. Vista points and terraces provide a wider view in a vast scale, and at the same time convey an entire understanding of the site with its surroundings. In environments with rich historic resources as well as physical and landscape features, such options are of importance to express the imposing and striking aspects.

Routing network helps providing an optimal site-use reducing the impacts of visitation. Routing network control the activities and enable visitors to have an orientation at sites. As a consequence, the visitor can keep following the route and visit the selected archaeological monuments. For this reason, visual climaxes should correspond to the most intensive or meaningful activity location and principal sequences should be situated along the important lines of circulation. Considering all these aspects, planning requires various forms of routes in terms of different themes and time duration. Over wide areas of archaeological sites, different themes relating with history, architecture or natural features enable visitors to give the chance to choose different options in visiting the site. Routes connected with different themes make the tour more interesting and attractive. Additionally, it helps not only to enrich the context, but also to relieve the pressure on particular archaeological structures at the site.

The routing on the site can be separated into two types: First type is to re-establish the routing using the ancient street network, if necessary by means of complementary design. The contemporary route connects the ancient buildings and places in a sequence of scenery. Its aim is to keep the authenticity as much as possible, in which the visitors can follow the ancient trail and experience the ancient city scenario. On the one side, the advantage of this type is to retain the ancient spatial structure in its original state and to emphasize the antique urban system through experiencing on site. Furthermore, the layers of historical development can be made visible. On the other side, the permanent usage of ancient trace inevitably leads to the disturbance of the archaeological material. Nevertheless, it depends on the carrying capacity of the archaeological structure as well as the historical and architectural value on site.

Second type for routing network is to re-establish a new route which is superimposed on the historical urban structure. The new route provides an efficient access system and visitor facilities, in which the visitation at site can be selected according to the archaeological and presentation status of the heritage. It can be designed in the form of a ring or circular itinerary which facilitates the visitor traffic relieving pressure at certain points. In addition, particular parts of the excavation area can be separated through orienting the itinerary to the next display point, so that the security and the control onsite can be provided. Hence, possible flexible and multiform patterns can be carried out through modifying the ground cover and topography congruent to the archaeological landscape.

In the circulation plan, it should be noted that presented sites should merge into their

settings. Above all, circulation system should emphasize the importance of the site through focussing on the urban structure, the visual structure or the time periods. This could possibly overcome the tendency of considering visitor as a threat on site.

5.4.2 Signs

Onsite signs are important items for orienting the visitor and providing information. There are mainly three kinds of information that should be given to the visitor. First one is the general information about archaeological site as “front-line” information, second one is the information about archaeological items, and the third information is about routing network, orientation and tourist facilities. There is a need to achieve a balance between brevity and detail. Carefully conceived and well-designed signs are a key management tool for keeping visitor on designated routes and out of sensitive areas.

Signs, tours and guides, and other communications devices can bring out the latent history of a complex site, with little of the interference with present function that may be caused by massive physical reconstructions (Lynch 1972: 54). The communication methods aim to address the sensuous, visual and imaginary perception of the visitor.

The location of signs should be deliberately chosen, as the relation between location and information is of great importance. It is an effective presentation of archaeological items, even if they are partially visible or not. Moreover, they are better experienced first-hand location than viewed in a visitor centre or off site (Aplin 2002: 43). The scope of sign selection changes from the size and capacity of site involving visitor interest and flow. But above all, the presentation model defined in the planning concept should determine a unity approach for different sites.

5.4.3 Infrastructure

Infrastructure is a prerequisite to provide the tourist facilities, maintenance and management organizations at archaeological sites. It is of essential significance as the visitor aspects are taken into account in order to contribute to the conservation of heritage and sustainability of the archaeological landscape. A comprehensive and conscious planned site organizes the interrelated physical features and spatial facilities. These facilities reinforce and develop what a visitor can do to interpret the site, find his direction and orient his routing. Through clarity and simplicity of visible forms, images are much more easily incorporated into perception. Furthermore it helps to create a first positive impression. Lynch (1971: 3) describes site planning as “the art of arranging external physical environment to support human behaviour”. It is of importance to understand the uniqueness and genius loci of the place, to enhance the historical visual landscape and protect the cultural and natural resources.

Infrastructure of a site is composed of movable and immovable structures such as visitor centre installations, access buildings, communication facilities, roads, and car park, as well as paths through circulation network and recreational facilities, control and security measures. As a consequence, all these facilities should take place in the predetermined site plan, where in situ conserved heritage is open and accessible to the public. In such a complex open space, where the qualities are sensed both visual and imaginary by means of scientific reality, the proposed infrastructure facilities should be based on this fact. In this respect, archaeological sites should be considered as a recreational area of special interest. Between these structures, interconnections can be established, or alternatively they can be situated in a particular area wherein the activities relating with their functions are restricted. By this way, the conservation of the archaeological remains does not have to be involved into the recreational part of these patterns.

The location of the visitor centre involving information and catering can be varied according to the spatial formation and the size of the site. But practically operational and logically ordered, it should be the first to visit for the visitor. In doing so, the information required for a conscious tour as well as catering, retail, and interpretative facilities are provided. They house shops selling souvenirs and related literature. Above all, remarkable and vivid visitor centre helps to relieve the pressure on the site.

The content and extent of infrastructure varies in the visitor density, capacity of physical setting, conservation grade of archaeological and natural resources, and the planning concept.

In addition, relatively unobtrusively in scale, yet practically in functioning, street furniture should be also taken into consideration. The term street furniture covers a wide variety of items, from litter bins to guiding standards and seating. Form, dimensions and material and the layout are the main factors in integrating to the environment as the appearance of these structures influence at last the whole site.

As a conclusion, the basic aspects of infrastructure are the following:

- Access should be in coherence with the capacity of visitor and the form of the archaeological site.
- Construction of a circulation system comprising a network of paths is a prerequisite as it helps orienting the visitor and organizing the routing at the spatial location.
- The provision of a hard-surfaced path around the monuments is convenient, where the excavations have been accomplished or the intensity of visitor flow threatens the archaeological ground resources.
- Particular visitor utility services (street furniture, toilettes, electricity, water etc.) are limited and landscape constructions are principally temporary.

5.4.4 Design aspects and design material

All visible natural and historical elements onsite are potential resources to be used in the design process. The existing spatial form should be supported through rhythm of structures and direction by means of a circulation concept. Spatial dimensions are reinforced by light, colour, texture, and detail. These features can be manipulated to establish the intended form or appearance emphasizing or creating spatial effect.

A relation to the scale of the surrounding structures and landscape must be established as the spaces of such dimensions appear extremely open and convey the feeling of emptiness. At the same time they have distant panoramas which the dominating feature in a scene is variable due to the movement of visitor. In this respect, two important visual processes take place during activity of visitation; one is analysing in detail and the other one is to perceive as a whole. In other words appearance of the space is modified by motion and activity. As a result, a visual sequence (Lynch 1971: 203) is established by means of spatial continuity in defining entrance and exit, direction goals as well as the distance and the scale. There are also some certain key sceneries or overviews which should be precisely emphasized by using expressively methods such as signs, information symbols and orientation tools. More over, the existing topographical features expose surprising and striking viewpoints at site. Such formations can lead the activity including perception; as a result they enable user to communicate with the archaeological landscape.

The natural elements like earth and rock are primary materials which enhance natural and historical scenery. They resemble with the ruins in character regarding texture, form and colour as they are both weathered and modified by the time. As a consequence, they tend to bind the archaeological landscape with the natural environment as a means of continuity in texture, form, and colour. Inevitably, different number of elements and cluster of structures make sharp contrasts according to differences in scale, proportion, size which can provide richness in scenery when it is used in a perceptual order otherwise it can lead to a detonation and dissonant in view sequences. Contrasting new and old can also create the feeling of depth of time.

The main structure of a site design is most often some sort of a site hierarchy, dominance or centrality (Lynch 1971: 220). To manage this, a central place is of importance to subordinate the linking paths and general visitor facilities to establish an organization of circulation in the site. A structural plan is then necessary in which the climactic points should be properly investigated. As a consequence, between two points, namely arrival and centre, the sequence can be planned.

As the characteristics of the activity tend to be stable, rather than the spaces itself, the visual sequence, circulation and structural pattern are to be arranged. In this respect, the locations of existing built elements can not be changed, the nature of the former buildings, archaeological remains are shaped by the help of natural elements of landscape. By this way the archaeological elements dispersed at site can be combined with each other not only to establish the relation of elements, but also complete form of context, and reveal the understanding of the site in every aspect. This also includes the separations at site which

provides to enclosure the space, to control the activity and to mask the unwanted features.

The visual character is drawn from dominant figures as well as the particular spatial formations viewed at site; landmarks like particular monuments, city-centre and other minor spaces are of importance in defining the site appearance.

Ground texture imparts the evidence of history and quality, but above all it directs the flow of circulation, guide the visitor and sometimes convey stories about site.

Protection shelters often strike to the eye, as they have changed the contours by different texture, colour and material. When they don't fit harmoniously into the landscape, they seem to be obviously artificial intrusions. In this respect, the transmissions in scale and form are of importance in establishing a consistent pattern.

5.5 Planting and vegetation control at archaeological sites

This issue is divided into two separate parts designed to provide both a background to the subject and some possibilities for the uses of plants in landscape design on the archaeological sites. The first part deals with the past and present-day vegetation qualities of the archaeological sites and the relation between the archaeological settings. The second part outlines the possible different approaches to their use in landscape design. More specific examples will be given in sixth chapter with particular case studies.

It is a fact that the developmental processes of cultures are closely connected with the natural environment. Consequently, contemporary archaeological sites are vitally linked with the system of natural places in terms of settlement history and natural processes. Above all, monuments and ruins should have a relation in physical, functional or structural level. However, none of these approaches are sufficiently integrated into the archaeological conservation measures. Hence, vegetation cover as an important part of this relation should be investigated on a broader scale in accordance with the preservation of archaeological landscape and presentation of the site.

Generalizing these problems, four main interrelated topics can be reviewed at the archaeological sites:

- Impacts of excessive usage: Threatening of archaeological heritage and their associated sensitive ecologies,
- Changes in seasonal climate; flood control, fire due to aridity,
- Erosion: Excessive topographical and climatic changes (floodplain of the River Meander) and plant cover transform due to excavations, over-grazing of surrounding areas,
- Impacts of over-growth of trees and scrubs on the heritage due to the roots.

5.5.1 General information about the Aegean vegetation

As the sites are situated at the same region, they illustrate similarities in terms of climate, topography, and soil characteristics. The archaeological sites investigated are located in the vicinities of İzmir-Bergama, Aydın, Manisa and Denizli. Denizli lies in the Inner Aegean region of western Anatolia, and so the mountain ranges vertical to the coastal line enables the Aegean climate to access inlands. As in many other regions, the biogeographical features vary both from west to east and from north to south. Mediterranean climatic conditions dominate on the archaeological sites mentioned in this work which are moderate and rainy in winter and arid and hot in summer. More than 2/3 of precipitation amount falls down in between November and May (Tuttahs 1998: 17). The west Aegean Turkey is surrounded in the north by Kaz dağları (mountains) which hinder the cold airflow masses to the Aegean region; while in the west Taurus mountain ranges reduce the extensive influence of Mediterranean climate. Grand Meander (*Büyük Menderes*) River, Little Meander (*Küçük Menderes*) and Gediz River streaming along the tectonic lines water the fertile valleys and plains around Ephesus and Miletos and finally flow to the Aegean Sea. The Aegean region consists mainly of rolling plateau country well suited to agriculture. The region in the crosswise northsouth and eastwest axes is characterized with a complex coastal line in terms of small islands, bays and hills form a succession of cliffs, coves, and nearly landlocked bays. Most of the shores are densely wooded and are marked by numerous small towns and villages (Mayer & Aksoy 1986: 6).

The Mediterranean countries, which are among the oldest cultural areas on earth, possess a plant cover rich in species and formations, which are generally understood to result from degradation and human influence reaching back far into history (Kehl 1995: 1).

It is a known fact that in the antiquity, the west Anatolian was heavily wooded. The Mysien (mysos= beech) landscape (Bergama-Bursa) as well as Milesian territory was covered with pine and cypress as well as cedarn, fir and oak. According to Strabo, Priene was surrounded by a dense forest rich in flora and fauna. Timber was an essential resource grown on the uplands and in the vicinities used in ship, building and furniture construction as the region had supplied quality timber (Greaves 2002: 13; Mayer & Aksoy 1986: 30). The demand for timber consumption in the antiquity has resulted deforestation in the region at a relatively early date, and consequently present-day degraded maquis formations has characterized the vegetation cover. The forests comprised of oak (*Quercus)* and pine (*Pinus)* groves have not existed in this form since antique times (Jagel 1996).

These areas are particularly prone to degradation because of environmental constraints and intense continuous human pressure (Maestre & Cortina 2004: 304). Archaeological sites in western Anatolia represent areas of intensively used and degraded former cultural landscapes. These arid and semiarid areas are dominated by degraded maquis cover and woodland. The maquis is the dominant vegetation of the coastal regions. It covers relatively high plateaus and slopes often mixed with patches of forests and, where there are small creeks with or without year round water, with riparian ecosystems.

In the antiquity, the geological diversity of the region provided a variety of different resources within their immediate vicinity. The local limestone and marble were commonly used for buildings. The gneiss stone from the north of and east of Milesia was preferred for larger and prestigious building projects.

Unlike the facts about the uses of natural resources in the antiquity, the knowledge about green areas and their planting patterns within the city in this region is extremely inadequate. Ancient literary sources are the only evidences relied upon the trees and plants used in the cities. The former gymnasiums were established in park-like settings with water and plant elements. One of the well-known gymnasiums of Athens; Akademia was located outside the city walls and in the Athena sanctuary twelve olive trees were planted. In the course of time, this area turned into a sort of public park with plenty of planted trees where an irrigation system was established as well. The Hellenistic city of Athens was encompassed by open green areas and parks surrounding the public buildings to enhance the cityscape. Plane trees (*Platanus orientalis*) (according to Pausanias) were generally used to provide shadow in the manner of tree rows or solitary planting such as in Agora, at cult places and Gymnasium (Wycherly 1991: 128; Loxton 1994: 15).

The traditional agricultural patterns in the west Anatolia and Greek islands generally consist of similar products. Olive oil, fruits, grain, vegetables, figs, honey, grape and pasture were mostly practised in the antiquity and still produced in the region (Georgiadis 2003: 5; Graeves 2003: 24). *Olea europaea* and *Ceratonia siliqua* were common trees in the Hellenistic culture, while *Castania sativa* existed as natural woodland in small amount in the district of Aydın and House of Mary near Ephesus and it was an essential tree in roman culture. Additional, *Ficus carica, Juglans regia, Morus nigra, Pinus pinea, Pyrus* species still exist as wild fruit trees in the region (Mayer & Aksoy 1984: 59). The plant cover up to an altitude of 750 m from sea level is commonly characterized by maquis formation. Some of the characteristic species widely distributed in the region are the followings: *Quercus coccifera, Phillyrea latifolia, Olea europaea, Arbutus unedo, A. andrachne, Pistacia lentiscus, P. terebinthus, Jasminum fruticans, Lonicera etrusca, Laurus nobilis, Calycotome villosa, Cercis siliquastrum, Myrtus communis, Ceratonia siliqua, Anagyris foetida, Gonocytisus angulatus, Cistus creticus, C. salviifolius, C. parviflorus, Anthyllis hermanniae, Genista acanthoclada, Erica arborea, Pyrus amygdaliformis, Juniperus phoenica.* The phrygana formation ranges from 0 to 500 m and it is dominated by *Sarcopoterium spinosum. Origanum onites, Coridothymus capitatus, Rosmarinus officinalis, Salvia fruticosa* and *Prasium majus* are also typical phrygana species (Öztürk et al. 1990: 11-13).

The alteration of landscape has affected the agricultural land-use resulting in the growth of new crops in the region. Cotton production and tobacco grown around Miletos are now one of the most important products in the region which dominate the local economy. Present-day vegetation pattern on the sites indicates that there are two main stages in the development of plant cover on archaeological sites. The first stage is the natural plant cover before the excavations. Alinda is a case in point (see Figure 4.20, p.107). The second stage emerges in the course of the excavations and forms its own landscape image. However, in observing the aforementioned sites in this thesis, it is found

out that the plant cover and vegetation types on sites tends to indicate the similar landscape in their localities. This means, the plants cover changes in the course of the archaeological activities, yet it is recovered, to an extent, in a similar way. Similar observations have been made throughout the sites in the south of Turkey. It is generally agreed that relative to the vegetation of Central Europe the Mediterranean vegetation is more original in its composition [34] (Kehl 1995: 1). Furthermore, many of its elements are felt to have high ecological resistance and ability to regenerate. It is important to remember that archaeological sites and their landscape setting contain habitat and species, some of which are of national and international significance and these values also need to be protected. Öztürk *et al.* (1990) identified over 300 native plant species at the archaeological sites of İzmir, Pergamon, Ephesus, Priene, Miletos, Didyma, Aphrodisias and Hierapolis which are known to be existed in the antiquity also.

5.5.2 Plant use

Plant selection comprises a wide range of geographical and climatic conditions due to the versatility of landscape, yet the heritage perspective explicitly bounds the usage of plant species.

Plant material is flexible, dynamic, and design-orientated. Plant usage depends on some particular factors:

- Site features: The physical setting of archaeological site, environmental features.
- Heritage features: The physical and archaeological conditions of the heritage. To some extend artefacts can be regardless.
- Usage capacity of site and user profile.

In this case, archaeological activities and contemporary re-planting patterns can be interwoven. As a consequence, the selection of plant location is generally flexible and is mainly based on the current excavation results. Therefore plant management is an essential subject in site design. Two essential issues are to be faced: The first one is the existing plant cover and forest stock, and the second one is replanting concept involved in the planning project. Existing plant cover can be removed or retained in a controlled fashion. As the excavations are carried out, plant cover as a hindering option can be removed. In this case, some trees or other perennial important species can be transported to a convenient location where they suit to a special garden preferably occupied in the archaeological site. Nevertheless, trees registered as heritage substance should be retained and conserved in its place.

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[34] On this subject see Schwarz (1936): Die Vegetationsverhaltnisse Westanatoliens, Braun-Blanquet 1936: Ackerunkraut-Fragmentgesellschaften. In: Tiixen, R. (ed.), Anthropogene Vegetation, pp. 38-50, Walter (1968): Die Vegetation der Erde (Band 2), Schmidt (1969): Vegetationsgeographie auf ökologisch-soziologischer Grundlage, Zohary (1973): Geobotanical foundations of the Middle East, 2 Vol.

The gardenesque (picturesque) form of planting creates a landscape-like park which reflects the romantic aspect of ruins such as secret, hidden and surprising effects. The types of site planting are varied according to the design approach at the archaeological site. Each sort of planting design creates another visual effect in defining the space quality and continuity. In addition to solitary usage, cluster and rows of planting trees creating repetition of a rhythmic interval can be used to define the historical structures such as columns of a portico or agora. It reinforces the architectural features by using plant material.

In replanting activities on archaeological sites, specific aspects should be taken into consideration respecting the archaeological and conservation values of the heritage. Special attention should be given to the planting patterns in the vicinity of both visible and buried remains as well as against the walls or paved areas. The design aspects are based on some existing natural feature and the success depends on conserving and accentuating the natural characteristics. In addition, the land formation, scenic values and overall appearance as well as land use are of essential importance. It should be aimed to search extensive planting which requires low soil depth and less maintenance conditions such as poor irrigation and drainage possibilities. These should be resistant to aridity, wind and rain as well as they should be able to regenerate. Environmental quality and cost effectiveness are also essential factors related with the selection of plants. Plants should always be used in accordance with a determined plan.

At archaeological sites, archaeological hard-surfaced spaces can also be planted by means of flowerpots. They provide the opportunity to cultivate a wide range of hardy perennials in hard-surfaced spaces. Furthermore, such a variable planting option allows greater flexibility in their placement; therefore it can be used in every convenient place. As they are growing solely in pots, plants with foliage and colour effect can be chosen according to the arrangement. Such a planting, in turn, require storage for the flowerpots in winter. This can be provided by a simple greenhouse at the site or near excavation houses.

Replanting and vegetation maintenance at the archaeological sites have always been tackled as a serious problem, in which the plant cover is seen as a threat for the heritage and so it should be principally removed. Controlling scrub and tree regeneration by the manual clearance of vegetation and reintroduction of grazing is an alternative way to the planting.

The usage of plants which characterize the site features is a prerequisite in determining planning strategies. Apart from the strict and conservative planting art which tends to the antique-originated plant species and indigenous plants, it is also possible to embellish sites with exotic plant species. New planting elsewhere could add to the character of the landscape in certain locations, particularly if reinforcing ancient woodland and depending on species, but it should not be permitted to detract from the open aspect of the landscape where this is the dominant character (Austen & Young 2002: 49).

In replanting concept, it is possible to reconstruct a simplified composition of an ancient urban ecosystem. To an extent, the surrounding plant features in the landscape of the archaeological sites enables the site to reconstruct the similar historical plant cover. History-based planting appears to be in close relation with the climatic conditions indicating the antique structural development as well as the importance of physical usage of the area. The contemporary effects can also be reflected on the preservation of physical conditions of the archaeological area and its presentation. Insofar, localized conditions and natural variations indicate the characters of plant cover and their tolerance of extreme conditions consequently affecting the whole management plan of archaeological site. After a comprehensive research and plant survey, the interrelations between plant ecology and the archaeological structures should be revealed in order to ascertain the susceptible species und their habitation. There have been references about antique garden tradition and ancient garden archaeology written by various authors[35] as well as information about vegetation cover extracted from the classical literature. Additionally, reconstructing vegetation and accordingly climate of past can be provided by paleobotanical and ecological methods which maintains the backbone of environmental archaeology (Brown 1999: 238). Paleo-environmental research compromises anthropology, physics, paleofauna, and paleobotanical study. The use of databases and the Internet are now providing a valuable tool in the reconstruction of prehistoric food plants and ecology (Brown 1999: 239).

The location of planting should depend on the direction of access from which the monument should be presented. In this case, planting can be used as a means of sign to provide the orientation.

One of the biggest planting projects in terms of landscape planning at archaeological sites has been accomplished in the Acropolis in Athens between the years 1955-1958.

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[35] On this subject see:

- Conan (1999): In this work, various scholars deal with the analysis of the evolution and development of garden history field over the years and comment on the current state and the next directions.
- The works of Wycherley (1991) and Papageorgiou-Venetas (1991) deal with the development of ancient cities whereas Hansmann (1983) and Clifford (1965) concern with the history of garden architecture and its development in general.
- Clifford (1965: 21) wrote: „Die Gärten waren in der Stadt und nicht vor ihren Toren gelegen und gehörten einer gehobenen Einwohnerschicht. Wie "Hof"; sie waren jedoch in eine Zufluchtstätte verwandelte Höfe. Architektonisch waren sie Räume im Freien, geistig bildeten sie eine Zuflucht geschützt vor Sonne, Wind und dem Lärm und Staub der Straßen."
- MacDougall & Jashemski (1981): This book deals with the various excavation reports from Roman sites in Europe. In these works the vegetation, garden formations and planting of roman house, villa and palace gardens are thoroughly described. Furthermore the knowledge concerning Roman gardening, excavation results about garden features, paleobotanical evidence and building plans are to be found.
- Caneva *et al.* (2003) identified the plant species from the frescoes of Livia´s villa at Prima Porta which represent one of the famous ancient Roman gardens in Rome. Most of the species painted on the elements are present in the Mediterranean forests such as *Arbutus unedo, Laurus nobilis, Nerium oleander, Quercus ilex, Quercus robur, Cornus mas, Myrtus communis*, or widely cultivated *Cupressus sempervirens, Cydonia oblonga, Pinus pinea, Pinica granatum, Papaver somniferum, Rosa centifolia, Phoenix dactylifera* (Caneva 2003: 143).

The aim was to create a cultural-archaeological park in the city. The landscape architecture Ralph E. Griswold from Pittsburgh/USA has prepared the re-planting plan for the Agora which was ultimately in 1956 implemented (Papageorgiou-Venetas 1991: 19-26, Schmidt 1993: 224). His main planning approach can be summarized as the following:

Plant selection:

- Selecting of plant species from indigenous vegetation (e.g. oak, planes, laurel, olive, white poplar, myrtle),
- Using of semi-tropical species (e.g. Cercis, Tamarix, Oleander, Prunus, Acacia, Pine, Cedar, Cypress, Rhamnus, Parkinsonia, rosemary, Erica, Calluna vulgaris, lavender, Teucrium, Ulex, Clematis, Lonicera, Smilax, English ivy),
- Planting wild species to display the richness of the landscape ecology,
- Fence planting (e.g. olives, laurel, fig and pomegranate*).*

Plant usage:

- Plants used as supplementary objects which should not compete with the ruins,
- Helping visitors to identify and appreciate the ruins,
- Establishing of paths and steps to make the ruins accessible,
- Establishing terraces for visitors to create sitting places and vista points,
- Installing an artificial irritation system.

5.5.3 Plant species and their design effects on the site

Native plants can be used to provide the local character regarding the ancient forms and the contemporary landscape view. Species indigenous to the localities are revealed as the most suitable plants for rural areas, yet they are very much underrated as design materials.

The wide range of native species at west Anatolian provides to find suitable plants for planting activities. One of the problems on sites is excessive plant growth and poor soil conditions, aridity as well as their maintenance. In situations where no topsoil is available native species are at their most valuable. Native plants do not require additional maintenance and they tend to be longer lived in poor soil than in rich soil. Archaeological sites generally encompass large areas with maquis scrubs, rocks, stones and low depth subsoil. In fact, these areas are short-term demolition areas surrounded by man-made structures in preference with the other historical areas such as gardens. In this case, a simplified composition of an urban open area or a natural ecosystem can be reconstructed in the formation of a formal green area or a cluster of trees, shrubs and herbs.

The practical use of native plants in landscape design including their establishment and maintenance is an important subject in landscape work on archaeological sites. In his

dissertation, Köse (1997) has aimed to investigate the optimum germinated plant species that are indigenous to Aegean region of Turkey. According to this, *Arbutus unedo, Arbutus andrachne, Juniperus oxycedrus, Ceratonis siliqua, Spartium junceum, Pistacia lentiscus, Cistus creticus* and *Cistus salviifolius* can be propagated to be used in landscape projects. These plants require minimum maintenance and they grow rapidly.

As ground cover plants; *Sedum species; Sedum acre, Sedum album,* and *Sedum hirsutum* can perfectly fit to the archaeological sites in terms of their hardiness (Küçükerbaş 1991). Native plants can be mixed with non-native species which fit to the environment. *Cotoneaster dammeri, C. microphylla, C. creeping juniper; Juniperus horizontalis* and varieties can be used to make contrast with their dark foliage and structures. *Genista* (arrow broom) species and *Erica* (heathers) in variety are also suitable for the archaeological sites.

Eleagnus tolerates extreme conditions such as flood and drought whereas *Populus alba, P. nigra* (poplar), *Ulmus campestris* (elm), *Fraxinus spp.* (ash), *Salix alba* (willow) are typical trees with greedy-rooted system consuming extreme water amount. In so far, root system is of importance, as damage to buildings, roads and drains may be caused by roots of certain species. Upward branching (fastigiate) varieties of *Quercus spp.* (oak) and *Acacia spp.* (false acacia) can be planted around the ancient buildings. *Cercis siliquastrum* (redbud), *Rhus typhina* (sumach), *Rhamnus alaternus, Berberis spp., Cydonia vulgaris* (quince), *Albizia julibrissin* (silk tree) and *Schinus molle* (American pepper) are some plants which can be used for their foliage and flower effect.

On archaeological sites, afforestation is not desirable as dense woodland screen the view, but “sacred woods” can be established to symbolize the place. Additionally, larger quantities of trees are generally found in the vicinity of the sites. Continuous dense planting can expand after a certain time, leading to screening the monuments. The branch configuration of such plants should be thoroughly retained-maintained in the same form. To avoid such an effect, trees which have particular silhouette forms should be selected. Plants with tapering, conical and columnar forms cover not only a convenient space, but also they do not compete visually with the heritage. As a backdrop planting, such as trees are generally used. Trees with a strong individuality – picturesque – are best used as single specimens with plenty of space around them (Tandy 1971: 71). Manipulating contemplative behaviour through viewing channels and approaching sequences and benches enables to admire the sculptural and picturesque setting by the visitors (Rutlegde 1981: 4).

The replanting strategy for Museumspark Kalkriese/Osnabrück in Germany is a case in point. The landscape architectural design aimed to create a similar landscape situation regarding the historical battle field of ninth century B.C. Consequently it was intended to carry out afforestration as a planting pattern in order to accomplish woodland succession in a park-like natural environment. The upper part of archaeologically significant ground layer found at a depth of 30 cm to 100 cm was covered with heather and pasture to preserve the buried structures in those layers.

In particular plants with root depth of maximal 50 cm were chosen so that the cultural material should not be destroyed by the roots of trees. *Populus tremula, Betula pendula* and *Salix alba* were deliberately selected due to the rapid growth and development so that a woodland can be formed in some years. Throughout the plant selection the natural vegetation of the region was regarded as the basic framework for planning strategies. Above all, the replanting pattern should reflect various periods of cultural landscape; namely the woodland of the battle field, contemporary situation of the site and the future development of the archaeological landscape within the museum park (Kohte 2001: 58-59).

5.5.4 Conclusion

According to the historical indications, the Anatolian forests had been partially deteriorated and destroyed due to various anthropogenic impacts such as exploitation, clearing pasture and fire. Additionally, the natural vegetation of intensive exploited cultural landscape through constructions and destructions had to be vanished. In particular, the vegetation on the sites appears to be meagre in quality and quantity. Nevertheless, there are nature-like sacred woodlands still existing in the localities of Denizli, East Taurus and Amanus (Mayer & Aksoy 1986: 32). Although the evidences are quite inadequate, it is possible to attempt reconstructing the vegetation partially both referring the rural and urban landscape of antiquity. The latter will underline the role of the surrounding environment through landscape architecture and design patterns on the sites.

Generally, archaeological sites appear to be barren and dry in terms of plant cover in summer which is the result of insufficient water and poor maintenance. By using native plants and adequate maintenance it is possible to establish plant cover in some parts in connection with a landscaping project. Water supply and maintenance of the site are two important aspects in landscaping in conjunction with the visual appearance of ruins. Partially reconstructions and interpretations of planting within the ancient public areas and existing vacant areas can enhance physical as well as visual qualities of the sites. In case of Aphrodisias, the vegetative cover, partially replanted, enrich the visual affect of archaeological remains (Figure 5.4).

Figure 5.4 Overview of the plant cover at Aphrodisias. The site is covered with poplar trees *(Populus alba)* and other maquis formations.

As a conclusion, planting at archaeological sites contributes to the following:

- Spatial and visual expression of archaeological landscape,
- Heritage conservation,
- Technical landscaping of the physical structure and development and preservation of ecology.

The key aspects pointed out in the planning concept can be summarized as the following:

- Selective planting of archaeological area and buffer zone,
- Selective removal of tree cover at archaeological area where it damages the sensitive archaeological artefacts (functional) as well as visual focus axes, angles and vista points (overgrowth of wild vegetation hindering the archaeological activities is very often the case in point where it occurs),
- Effective woodland management to improve the quality and contribution of the existing woodland,
- Re-structuring of the existing woodland and linkage through new planting,
- Existing woodland can be selectively replanted as mixed or broadleaved native woodlands,
- Replanting native or antique-originated trees and bushes in terms of design elements provides defining the boundaries of the antique setting, location routing, accentuating the historical and contemporary topography, stressing the views through sheltering or screening unwanted views and structures and establishing spatial continuity: reconstructing the vanished or invisible parts of structures such as basement, ground plan, streets, combining monumental buildings with axes, columns, boundaries, city

walls, gates etc. through substituting with plant material. Example: In Rome, Venus and Roma Temple (Schmidt 1993: 242-243) (Figure 5.5),

- The effects on the site are mitigated through careful design,
- Rehabilitation of damaged landscapes through landscape interventions: These problems vary from natural to anthropogenic-based impacts regardless of the region or period involved, yet in every site, they arise in different cases.

Figure 5.5 Venus and Roma Temple in Rome (Courtesy of Lehrstuhl für Baugeschichte und Bauforschung, TUM).

Summary

In this chapter, it is intended to develop theoretical planning principles for presentation of archaeological sites. Presentation is meant as the spatial and physical organization through principals of landscape architecture integrated with conservation measures. Integrated planning concept indicates to develop a long-termed process of archaeological resources in its working landscape.

Archaeological sites are granted to serve as spaces with presentation and interpretive facilities through a design concept to enliven the appeal of the public heritage. To an extent, design strategies intend to rehabilitate the structural attributes and land-use in terms of landscaping the area, furthermore it establishes not only the visitor circulation through reorganizing the trails, but also create vista points, meeting corners. Above all, infrastructural components including car parking, entrance and exit, information centre through media systems and museum as well as shopping and gastronomy complexes provide protection to reduce the impacts of over-use.

The concept of planting and vegetation patterns, in most cases undervalued and ignored, is particularly underlined as efficient and valuable design objective. Traditional and historical planting patterns may be chosen to add a sense of timelessness.

In the vicinity of archaeological sites, the presence of native vegetation indicates evidences for the plant cover and environmental requirements in the ancient times. Likewise, the traditional agricultural and planting patterns can be useful in interpreting the landscape design on sites.

5 PLANNING PROPOSALS FOR ARCHAEOLOGICAL SITES: THREE CASE STUDIES

On behalf of the empirical research, seven archaeological sites (Aphrodisias, Miletos, Priene, Didyma, Ephesus, Hierapolis and Pergamon) were examined and analysed by means of discourse method. Consequently, Aphrodisias, Miletos, Priene and Didyma were illustrated briefly in the fourth chapter.

In this chapter, archaeological sites of Pergamon, Ephesus and Hierapolis are comprehensively examined as cases studies to demonstrate concrete planning proposals. These sites epitomise typical archaeological landscape features providing various planning possibilities which allow for flexibility in light of local topography. Geologically; Ephesus, Pergamon and Hierapolis share a lot of its history with the Meander massive and its rivers. Consequently, they form a coherent group in terms of local physical and topographical setting as well as historical and archaeological structure. Moreover, they are all perfectly superimposed on the terrain.

The first case study encompasses the archaeological site of Pergamon due to its spatial and visual features in close connection with the modern city of Bergama. The second case study consists of ancient city of Ephesus; one of the most well-known and visited archaeological site of Turkey in the Aegean region. The last case study examines Pamukkale-Hierapolis which is a designated WHS by UNESCO in terms of its extraordinary natural resources and the remains of ancient city Hierapolis.

The landscape features are considered as the seminal aspect in developing the planning options. Landscape design proposals aim to preserve and present the archaeological sites regarding future-oriented development. Another approach is to reveal the recreational activities and amenity values through improving the cultural heritage assets and its landscape setting. In order to obtain more precise information about the ancient vegetation, palaeobotanical research should be conducted.

Throughout the previous chapters it was alluded to the historical environment, heritage conservation and management as well as presentation types regarding landscape design and planning principles. Particular attention has been drawn to the archaeological sites as a cultural landscape phenomenon in terms of physical and spatial setting where both scientific activities and recreational activities are carried out. Above all, it was argued that the contemporary design principles play an important role in linking past cultural settings with their contemporary usages, presentation and conservation of archaeological sites and landscapes in particular. The planning objectives hold wide range of aspects including preservation, nature protection, local prosperity and land-use.

There are many sources of information that can be used establishing planning options on the site. Apart the traditional stakeholders of the cultural sites such as archaeologists, architects, conservationist the need for other disciplines have been recently recognized as the demands and undertakings have increased. These have interests in particular aspects of the site.

It leads to a broadening of the types of the values toward a greater inclusion of aesthetic contemporary values of the wider setting of landscape (Mason *et al.* 2003: 27).

The archaeological landscapes of Pergamon, Ephesus and Hierapolis are viewed in relation to the archaeological monuments within that area (and *vice versa*), and in subsequent sections the nature of the landscape and land use. An understanding of the physical environment is not just useful but essential when one is trying to understand the any ancient city (Greaves 2002: 1). Hence, I concentrate on the landscape significance of the sites rather than the historical significance. In order to evaluate the sites, four main aspects are taken into consideration: Location (geographical location; in the vicinity of a city, situated on or near a highway or main street, size of the area, traffic linkage, intensity of tourism etc.), landscape features, historical and archaeological values of the site, and vegetation. Under the light of these aspects landscape planning and presentation concepts are proposed for the three case studies.

6.1 PERGAMON

Location

The modern city of Bergama, northern district of İzmir, is situated on the plain Bakırçay (Kaikos) River which empties its water to the Çandarlı Bay. The ancient city Pergamon is located on the hills of modern city of Bergama (about 70,000 citizens). It is placed at 110 km northern of İzmir and 30 km from the seacoast, as a result it receives great amounts of tourist groups during summer months. Even in winter the visitation continues. Pergamon, due to its location as an acropolis city (Ashworth & Tunbridge 1990: 79) has preserved its architectural heritage, while the modern city has expanded as a partially tourist city in its functions and setting.

The plain of graven covers an area of 3.200 km². In the north, Madra Mountains and Kozak plateau, and in the south Yunt Mountains take place. The Acropolis is situated on the Kale Mountain as the core of the settlement since the Archaic period (Şahin 2004: 39).

Historical and archaeological significance

The main buildings visible today most probably were erected under Eumenes II (Figure 6.1). On the top of the Acropolis, the Temple of Trajan raises in this exposed archaeological landscape. The famous Pergamon Altar also took place in the Upper City, on the terrace between the upper Agora and the Temple of Athena (Parrish 2001: 23). The slopes of Kale Mountain expose the open landscape in the foreground and the vast area that extends into the far distance.

In the Roman rule through vanishing the fortifications, the city had expanded to the lower level where the modern city Bergama is today located.[36]

Figure 6.1 The city plan of Pergamon: Reconstruction of the Eumenian and Roman street systems (© Ernst Wasmuth Verlag Tübingen) in "Pergamon: Citadel of Gods" (Koester 1998: 444).

At the foot of the Acropolis lies the Red Hall, the ruins of the Roman temple surrounded by old Bergama houses together with ancient Asklepieion located on the south-west of Pergamon constitutes an archaeological zone around Bergama. Asklepieion, an important

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[36] On this subject see W. Radt; "Pergamon. Geschichte und Bauten einer antiken Metropole" (1999), Parrish (ed.); „Urbanism in western Asia Minor" (2001) and Koester (ed.); "Pergamon. Citadel of Gods" (1998).

sanctuary, served as a pilgrimage centre and encompassed a large open space. On the one hand, the spatial separation of the archaeological sites reinforces the tourist activities and the functional shift of the areas. On the other hand, it constrains the economical as well as social and cultural benefits, as the central commercial district can not be developed as an entity. In order to use the benefits of the rich archaeological heritage in the region, a management plan including conservation, presentation on site and tourist facilities in the modern city is a prerequisite. As a result, the distinctive historical sites should be combined in the modern city in terms of cultural, social and commercial activities as well as tourist facilities.

At Pergamon, the archaeological significance lies on the wealth of the ancient Roman resource. Not only architecture and sculpture, but also the location and the composition of monumentality in the wider landscape are of essential interest. The particularly rich assemblage of archaeological sites, both visible and buried, provides a vivid record of past landscape patterns and use. The three archaeological settings; the Upper city, known by visitors as the Acropolis, The Temple of the Egyptian Gods so-called “the Red Hall” in the Lower city and the Asklepieion are located framing the Bergama district as the cultural-archaeological heritage zone (Figure 6.2).

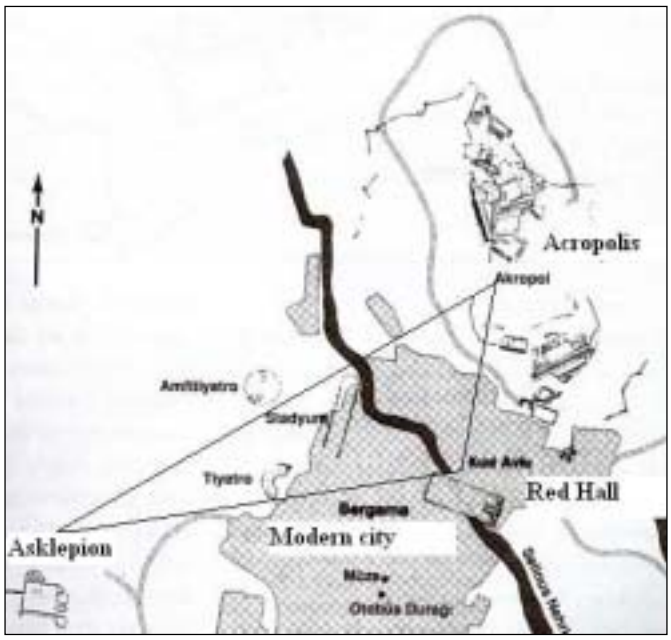

Figure 6.2 The location of Pergamon. Acropolis, Asklepieion and Red Hall surrounding the modern city of Bergama (After Tül 2000: 19).

As Pergamon expanded into the valley in the Imperial era, Roman times under Trajan and Hadrian (i.e., the first half of the 2nd c. A.D.)(Radt 2001: 49) they were juxtaposed with each other in which the Asklepieion was tied by a colonnaded street to the urban plan (Parrish 2001: 31). The courtyard of the temple which was built in the time of Hadrian is almost concealed beneath the houses of modern Bergama. Not only is the architectural and historical framework of Pergamon impressive, the density and the composition of monuments on the Acropolis in the wider landscape are of considerable interest. Unlike the other archaeological sites, the Acropolis is situated on a visible ridgeline viewed from all the points in Bergama.

The inter-visibility between the Acropolis and Red Hall as well as Asklepieion and the Acropolis in the wider distance provides a spatial and visual connection. Hence, the archaeological ruins contribute to a wider significant landscape in and around Bergama.

Landscape features

The distinctive character of the area lies upon its spatial and visual relationship between the modern cityscape and archaeological heritage. This has important implications for both urban planning, conservation and presentation of heritage, not least in how visiting tourists are generalist perspective of heritage. Unlike the other archaeological sites mentioned above, Pergamon and its associated sites and monuments widen in the modern city of Bergama and her environs.

However, the unprecedented growth of modern city has not only changed the natural and archaeological landscape of the city but also has caused rising threats to the archaeological settings. There was a change in the 1960s to make the area of Bergama a kind of national park (Pergamon Historical National Park: Master plan for protection and use). But it had not been realized (Radt 1998: 2).

Vegetation

The Acropolis is situated on the 335 m high massif which is consisted of andesit (Garbrecht 2001: 6). The theatre, located on the steep slopes of the north of the modern city of Bergama, is the magnet point for the cityscape of the lower city of Bergama. The Theatre of Pergamon, which was constructed in the 3rd c. B.C., is one of the steepest theatres in the world and it has a capacity of 10,000 people (Şahin 2004: 49). The steeply sloping northern hillsides that drop down to the plain of Bergama are covered with strongly devastated maquis scrub and phrygana. The sloping terraces and site contain a mosaic of pasture and maquis. Alike the other sites, the degradation of forests to maquis and pine trees have begun in ancient times already (Radt 1988: 15). The irrigation on the archaeological site of Pergamon and Asklepieion is supplied by tankers carrying water up to the archaeological site. Therefore, in order to conduct a regular water supply on the site, water tanks and an irrigation system which is manual or automatic is required. The latter is quiet difficult through the steep topography and the archaeological material on site.

Garbrecht (2001) reports that regarding the climatic constancy in the past thousand years, it can be assumed that the present-day vegetable and agricultural crops in the region are similar with the ones cultivated in the ancient times. However, it is evident that the extending area around the ancient sites was largely covered with a rich forest layer.

The differences in the site distribution of maquis remnants from the core area to the periphery are almost homogeneous. Shrub complexes and trees disperse around the vast areas and the remains indicating the anthropogenic influence on the landscape In the vicinity of the archaeological site *Pinus pinea* forests dominate in particular the north of Bergama, Kozak plain.

In addition, degraded forests of *Pinus brutia* were converted into maquis cover which derivates with phrygana formation.

The characteristic pattern of maquis groups include *Quercus coccifera, Styrax officinalis, Arbutus unedo, Arbutus andrachne, Laurus nobilis, Phillyrea latifolius, Pistacia lentiscus, Nerium oleander, Olea europa, Paliurus spina-christi, Ficus carica*.

On the barren rocky sides of degraded maquis cover, some of the plant groups are the following: *Asparagus acutifolius, Sacropoterium spinosum, Cistus parvifolius, Cercis siliquastrum, Erica arborea, Jasminum fruticans, Spartium junceum* (Akalın *et al.* 1981: 4251-4252).

The park around the Red Hall is planted with the local trees and bushes (Figure 6.3 and Figure 6.4). Some of the columns excavated by chance at Red Hall were set up in different places in the modern town of Bergama, reflecting efforts of the municipality and the museum to embellish the centre of the town (Figure 6.5) (Radt 1998: 28). Additionally, the urban embellishment around the Red Hall has positively affected the historical environment and enhanced the value and significance of it (Figure 6.6). On the Acropolis and Asklepieion, where the natural vegetation exists in small clusters, similar pattern of aforementioned maquis groups can be seen. *Pinus pinea*, an indigenous conifer type of the region which is planted in Kozak northwest of Pergamon for the production of pine nut, dominates the forest cover around Bergama.

Figure 6.3 “Red Hall”, or Temple of the Egyptian Gods, view of the ruins from the park situated nearby.

Apart from the excavation of ruins on the archaeological sites, the existing vegetation also plays an important role not only in defining the aesthetic appearance of site and its landscape but also in protecting the cultural heritage. The impact of degrading soil and plant cover results mostly in erosion of ground and steep sides. Vegetation is a highly dynamic and vital component which affects all processes (Thornes 1990).

The landform after the excavations has become an arid area revealing the past in the form of buildings and ruins. In some sites, by the time the maquis and phrygana cover has spread throughout the ruins and the bare sides.

Figure 6.4 Park elements at the entrance of the Red Hall; the remains of the “Red Hall” temple building is embedded into the planted areas.

Figure 6.5 View of Acropolis - Pergamon from the square of the modern city of Bergama. Ancient formed columns and the pine tree (*Pinus pinea*) represent the symbols (values) of the town.

The role of plants should be taken into consideration in the development of landform and in slope stability. Vegetation may influence rainfall routes, runoff and subsurface flow, temperature and wind characteristics (Thornes 1990: 13).

Figure 6.6 The view of the street in front of the Red Hall. The street has been renewed through restorations and pavement in order to enhance the historical environment and socio-economical structure of the locals.

Figure 6.7 The western steep rim of the Acropolis with Trajan´s Temple silhouette and the theatre is the main view from the centre of the city Bergama.

The western steep rim of the Acropolis with Trajan´s Temple silhouette and the theatre is the main view from the centre of the city (Figure 6.7). This barren side of the hill can be planted in particular with scrubs which should not prevent the vista of the Upper city. Although Pergamon covers a large area with a rich ancient structure, the visited area by tourists appears to be the partial area leading to Trajan´s Temple. Certainly, the reconstructions of ancient buildings play an important role in attracting visitors. On the other hand the reconstruction of the whole setting through planting can enable the site to enhance its visual assets of the landscape where the remains are inadequate to convey a picture of antiquity for the visitor. Hence, planting patterns in the manner of ancient times could be proposed where the features are convenient. In case of Pergamon, partial planting reconstruction could be carried out between the archaeological remains.

Landscape design proposals

The archaeological site planning should consist of three stages. Pergamon, Asklepieion and the Red Hall including other monuments in the district should be considered as one unified cultural heritage. Above all, the old city and the modern town of Bergama should be integrated in the later stages of management and planning.

- ***Visitor centre***

It should be considered to meet the needs of visitors regarding informative as well as recreational oriented objectives. The ancient city of Pergamon, sanctuary Asklepieion and the Red Hall are all connected with each other in terms of history, archaeology and architecture. Hence, an information centre park at this point can be of essential importance to gather the visitors coming to visit one of the sites or perhaps all, and present the history, archaeological and architectural background information about the region in terms of short films, books, and photos displayed in a park. The open area in the neighbourhood of the Red Hall can be established as an "*information park*" for this purpose. Ticket sale can be carried out for all three sites. Here, besides information centre including film and slide shows and cultural events, different attractions such as a theme garden "*ancient herb garden*" can reinforce the interest and senses about the heritage. In order to envision a fragment of ancient flair, it can be attempted to display economic plants and medical herbs, such as olives, wine, wheat, lavender that are known to be used generally in the ancient world.

It is recognized that the amenity value of archaeological sites is of great interest associating with its historic character and archaeology. Such a proposed visitor centre can provide a new approach to interpretation and presentation in the region.

The small-size park situated in the east of the Red Hall can be enlarged to the east direction in which a theme garden can be established, eventually formally designed according to the ancient garden patterns in Pompeii. Landscape design in Bodrum castle (see Figure 4.8, p. 104) is also a good example in case.

- ***Alternative access routes to the site***

For the visitors who want to follow the traces of ancient streets and old district of Bergama, new access opportunities can be offered in the north-east direction of the archaeological site Pergamon (Figure 6.8 and Figure 6.9). This opportunity should encourage visitors out into the rural landscape of archaeological site. Consequently, the lower city can be visited as well as Acropolis, where the tours are mostly concentrated. Moreover, the wider landscape has limited the visitor interest. Establishing a connection between the Acropolis and lower city is of essential importance in which key views in the wider landscape should enhance the quality of the site. The tracing should be clear and in some parts planting should be practiced to generate seating facilities. Information panels are required in focal points to interpret the archaeology and the historic landscape.

- ***Planting***

It can be divided into two sections:

The Lower city:

Here, a new design approach can be carried out where the areas do not contain sensitive archaeology. Tall trees such as *Acacia cyanophylla* (evergreen), *Acer campestre, Morus alba, Albizia julibrissin* can be used to provide shadowy sitting areas. *Cersis siliquastrum, Olea europaea var. oleaster, Berberis vulgaris, Cotoneaster* and *Crataegus* species can be planted as scrubs in small groups to create texture and soften contours as well as to accent with columnar trees such as *Cupressus sempervirens, Quercus robur "Fastigiata"* and *Populus alba*.

It is of essential importance to take into account that the plants should be resistant to drought and poor maintenance. Whilst pruning once a year keeps the actual form and enables the view axis to retain. Both the existing and extended green areas can be managed by means of grazing which should be practiced by a low density of livestock. It is recognized that intensive grazing impacts the plant ability of regeneration (Austen & Young 2002, Brinkmann *et al.*1991, Kelh 1995). However, this approach offers to improve the quality and structure whilst conserving the archaeology.

The Acropolis public access gate should be re-organized providing standard tourist facilities. The route leading to the Temple of Trajan should be accentuated by planting tall trees reinforcing the imposing ancient city silhouette. In Roman Imperial times under Trajan and Hadrian (i.e. the first half of the 2nd c. A.D.), Pergamon was the scene of continuous and massive building activities. The most impressive Roman construction on the Acropolis was the Temple of Trajan which is today still appreciated as an impressive ancient monument.

Planting on the Acropolis:

Specific areas in the vicinity of ancient buildings and open areas can be planted as groups or in solitary form. On the core area, small numbers of individual planted tall trees and small groups of scrubs can be well-located as the site displays mainly the ruins and the surrounding landscape of the modern town of Bergama. Moreover these trees should be resistant to aridity and poor maintenance as there is no flowing water on the site. *Pinus pinea* can be used reflecting the dominant native vegetation.

Figure 6.8 View of the fortification walls of Pergamon (left) and the protection house (right) from the park located near the “Red Hall”.

Figure 6.9 The view of the Roman Temple “Red Hall” from the German excavation house. The houses of the old district of Bergama (in foreground) and the new settlements (in background) of the modern town of Bergama encircle the archaeological remains.

From the access gate to the temple of Trajan, rows of *Cupressus sempervirens* not only accentuate the silhouette from the city centre of Bergama, but also reinforce the view on The Acropolis. The steeply sloping northern hillside can be planted with maquis scrubs, such as *Laurus nobilis* and *Quercus coccifera* which provide ground stability and emphasize the fortification walls. Also on the Theatre platform between Dyonisos Temple and ancient gate another line of trees, particularly pyramidal formed species such as *Cupressus sempervirens, Thuja occidentalis* or *Taxus baccata* can be planted to emphasize the monumental effect.

6.2 EPHESUS

Location

Ephesus lies at the bay of Menderes where Küçük Mendres River (River Kaystros) flows into the Aegean Sea. It is located 70 km south of İzmir (highway of İzmir-Çanakkale E87), and in the closed periphery of Selçuk and Söke. The modern city of Selçuk, situated in the east of the archaeological site, has expanded in the recent years due to the rising tourist interest in the region.

Another entrance is located at the south end of the (west and northwest axis) site where at the existing car park tourist coaches generally wait for the tourists. The street south of the site along the coast leads to Kuşadası, the modern village as holiday centre in the region. The street also makes a looping to the direction of Selçuk and to the highway. Insofar, owing to its convenient position Ephesus is accessible in all directions. The highway İzmir-Çanakkale which is an important tourist route crosses to all holiday directions. The adjacent historical places Meryemana Evi (The House of Mary), Yedi Uyurlar (Seven Sleepers) and the other archaeological remains (Belevi Mausoleum, İsa Bey Hamamı, İsa Bey Mosk, St.John Basilica) scattered around Ephesus compose one of the most focal tourist peripheries in the Aegean Turkey. Because of the historical and spatial links with the Virgin Mary House and St. John the Theologian, Ephesus has become a major pilgrimage site for Christians, a fact reflected in its urban development and number of Churches (Parrish 2002: 31).

At Ephesus, due to the archaeological undertakings, the archaeological site opened to the public has been oriented to the northsouth axis, bounded to the northeast and west by the hills of Bülbül dağı (Mount Preon) and double-peaked Panayır dağı (Mount Pion). This axis is formed due to the ancient main street; Ephesus's central avenue Curetes Street or the Embolos[37] (Parrish 2001: 11), lined with a group of monumental buildings and fountains which serves as the main visitor street at the site. The existing car park, souvenir shops and visitor entrance are situated on the archaeological site. This leads to restrictions in the development of the excavations and the presentation of the archaeological area.

[37] Embolos was the main artery of the Hellenistic-Roman city, and the center where the urban elite of Ephesus had their sumptuously furnished residences- the Terrace Houses (Krinzinger, F. (ed.); Ein Dach für Ephesos 2000: 19)

Due to the intensive use of the main street, alternative routes should be integrated to the planning concept. For this purpose, Austrian Archaeological Institute proposed tourist facility plan including visitor route at Ephesus (Figure 6.10).

Historical and archaeological significance

Ephesus, situated alongside the sea as an important harbour city in the ancient times, had lost its connection with the sea in the middle age definitely, is now located 10 km inland from Pamucak´s beach Pamucak (Georgiadis 2003: 4). The excavation of Ephesus[38], begun by the British engineer John T. Wood in the 1860´s, has been conducted by the Austrian Archaeological Institute since 1895 and supported by scholars and institutions in numerous countries (Scherrer 2001: 57).

The settlements along the bay where Little Meander (*Küçük Menderes*) River flows into the Aegean sea dates back to the 5th millennium B.C.[39], but the remains of ancient Hellenistic and Roman town of Ephesus forms the contemporary archaeological site. In the Roman imperial period, dated in the 2st c. B.C. Ephesus, due to its harbour and strategic location, reached its imposing urban development, and became an significant and vital city; namely fourth big city after Alexandria in Egypt, Antiochia and Athens in the eastern empire. Along with the contemporary rivals Pergamon and Smyrna, Ephesus was regarded as the largest metropolis of Asia Minor (Knibbe 1995: 24).

[38] About the history and the architecture of Ephesus see “Ephesos. Der neue Führer: 100 Jahre Österreichische Ausgrabungen 1895-1995 (1995)“, P. Scherrer (ed.) and “The sacred identity of Ephesos” (1991), G. Rogers.

[39] For more information about the geomorphologic evolution in the environs of the ancient city of Ephesus see “Paleogeoraphies of ancient coastal environments in the environs of the Feigengarten excavation and “the Via(e) Sacra(e) to the Artemision at Ephesus” (J. Kraft *et al.* 1999: 91- 100) in “Steine und Wege” P.Scherrer (ed.) (1999).

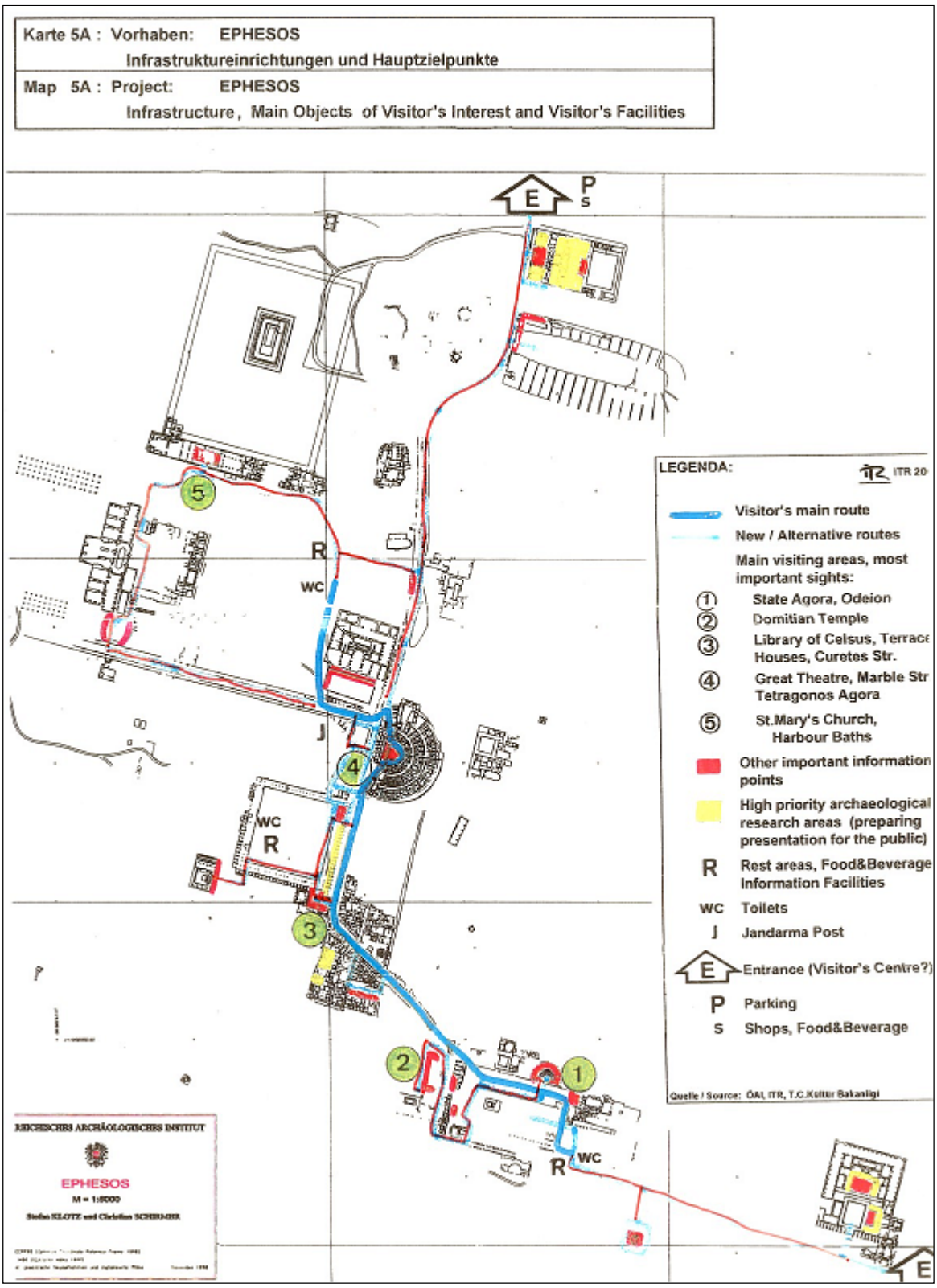

Figure 6.10 The city plan of Ephesus with the proposed visitor route along the main attractions (Courtesy of Österreichisches Archäologisches Institut 1998).

According to the visitor facilities and infrastructure plan, alternative routes to the Harbour Baths and Tetragonos Agora are proposed to develop at the site in order to display the recently researched parts of the site. For this aim, the visitor should be encouraged by attractive routes and landscape formations to walk in the wider distance within the site. In this case, the access on the site extends to a wider landscape in which the whole duration of stay relatively increases.

The main visiting areas include the State of Agora, Odeon, Domitian Temple, Celsus Library, Terrace Houses, and Great Theatre (Figure 6.10). The new magnet point is the Terrace Slope Houses (Figure 6.11), displayed under the modern protective shelter since 2000.[40] The Terrace Houses, upper class residences in the Embolos (Curetes Street), date no earlier than the second half of the 1st c. B.C., were constructed for the wealthy citizens of Ephesus (Scherrer 2001: 68-78). This unique building complex, with its wall paintings, mosaic floors, decorative stone work and other architectural elements can be now visited under the protection shelter for specific times with extra payment.

Figure 6.11 The protective shelter of the Terrace Slope Houses 2 aims to protect the valuable material against climatic and environmental conditions as well as intensive visitation. The visual harmony of the modern structure with the archaeological landscape and topography is debatable.

Tourism

Tourism plays an important role in the present and future oriented conservation and development concept of Ephesus and its environs. The cultural-archaeological landscape of the region is composed of a mosaic of cultures. Ancient, Byzantine, Seljuk, and Ottoman dated monuments and buildings are scattered in the region.

[40] The project proposed by the planner Prof. Dr. Wolfdietrich Ziesel (Vienna) and the architect Otto Häuselmayr (Vienna) is based on a lightweight supporting structure of high-grade steel with a roofing of textile membrane and a transparent polycarbonate façade in the form of overlapping scales (Krinzinger, F.(ed.); Ein Dach für Ephesos 2000: 51-61).

Since Roman times, the region has become a magnet point for national and international tourists. According to Barutçugil (1986), in ancient times the democratic Polis city Ephesus, which was founded in B.C. 334, has received great numbers of visitors from all over the world. The Artemision, as one of the *Seven Wonders of the World* received numerous tourists from abroad and consequently tourism was an important economical source for the city. In this period, Ephesus with its theatres, library, agora, streets and entertainment facilities was an important and well-known culture, art, and trade centre in Anatolia. Today Ephesus, as an archaeological heritage site, is well-known through the outstanding visual, archaeological and architectural qualities. Restorations and reconstructions have enabled the visitor to comprehend the archaeological ensemble and enhance the landscape. Therefore, the significant visual and architectural impacts of remains and places of interest should be focused as landmarks of the site in the planning options.

Religious tourism also plays an important role in this region. Ephesus and its environs have received Christian tourist flows from all over the world since Pope Jean Paul`s visit to the Mother Mary House, and the declaration of the Mother Mary House as a pilgrimage centre in 1964 (Erdemgil 1993).

The presence of natural and cultural heritage influences the development od towns. In the recent years, due to the expanding tourism activities, the modern towns in the vicinity of archaeological sites have also improved their infrastructural and spatial qualities in order to benefit from the raising tourist interest. The modern city of Selçuk is one of these towns aiming to integrate into the historical structure of the region. The town has expanded due to the developments in tourism. In 1957, Selçuk was a province of Aydın and in 1966 the first master plan of city was accomplished. Efes festival has started in 1962. In 1972, *International Camel Festival* was conducted. All these efforts have contributed to the tourism development at the region. Interest of public to the archaeological findings has started with the restorations in Ephesus and establishment of museum in Selçuk. Due to these aspects the modern town of Selçuk has enhanced the quality of urban landscapes within the historical-cultural area.

Figure 6.12 At Ephesus, inadequate sun protectors for the visitors. The archaeological remains are used for tourist needs.

The recreation of open areas and public parks aim to encourage tourists and visitors

spending more time in the city improving the tourist capacity of the city and its spatial and visual standards. However, except of planting the urban parks, an appropriate plan concept for the integration of city to the historical framework of the region could not be developed. In addition, the historical landscape of the city as well as the region should be used to promote broad themes about changing archaeological perspectives of place (Rowe 2001). Excessive usage of the cultural resources due to the poorly-managed tourism and its consequences can threaten significant physical and natural characteristics (Figure 6.12).

Landscape features

The landscape features at Ephesus can be divided into three parts. The first part is the periphery of Meander which can be observed from the hills and higher points such as the theatre. The slopes of the eastern hills of the site offer good visibility of the coastal parts. The west slopes of the hills facing the sea offer a wide range of visibility (Figure 6.13).

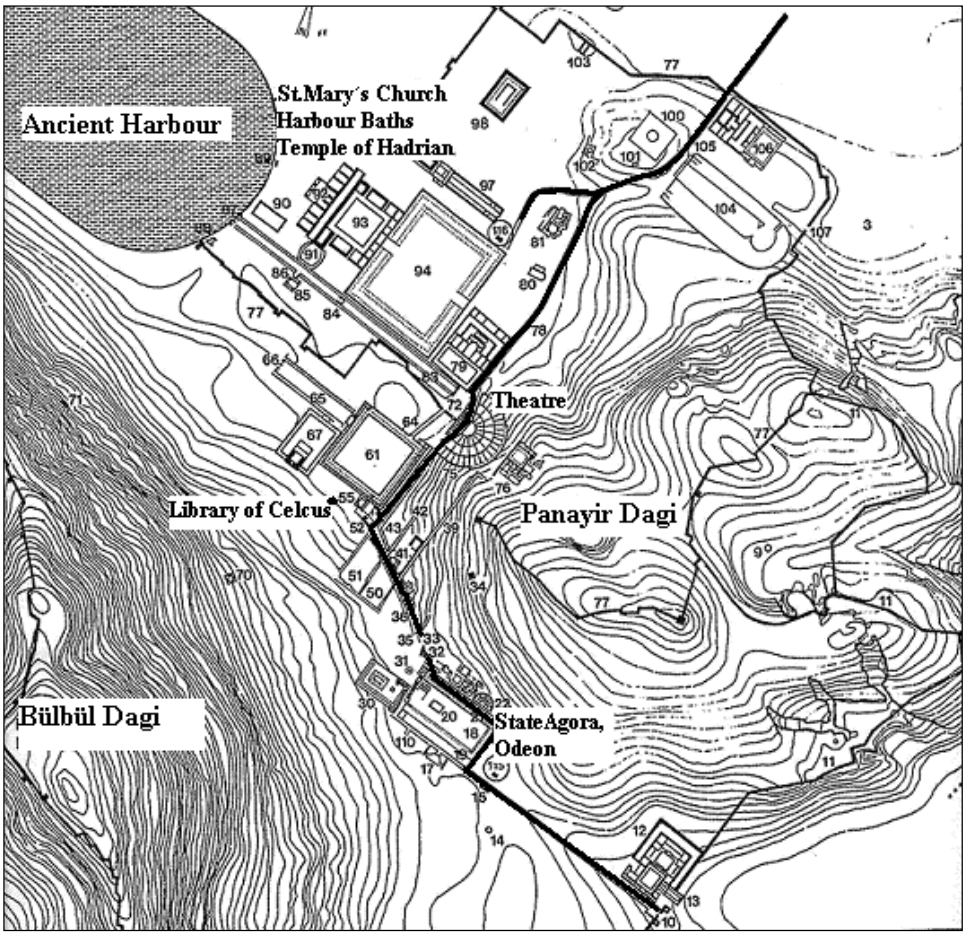

Figure 6.13 The topography of the ancient city of Ephesus. The ancient city was located in the valley between two twin mountains; Bülbül dağı und Panayır dağı. The ancient harbour was situated on the plain of the Meander River (After Scherrer 2001: 65).

The west side of the site, former harbour basin, at the present-day shows the Meander plain, the formation of silting up the sea. As in the antiquity, the landscape was different than today, the former coast and harbour landscape should be implied through associating with the history of the city.

The second part is the archaeological remains observed from the main ancient avenue; Curetes Street. The third one is the view of both mountains and its vegetation. The route along the main street is enclosed by the mountains covered with maquis and phrygana mixed vegetation. The mountainous area surrounding the archaeological city appears barren (Figure 6.14) yet in the ancient times it should have provided ample grazing for flocks, and supplied the city with timber.

Figure 6.14 At Ephesus, State Agora and Bouleuterion. The Bouleuterion is perfectly fitted into the landscape; at the foot of Panayır dağı. The surrounding plant cover composes mainly maquis and phrygana formations (Courtesy of Lehrstuhl für Baugeschichte und Bauforschung, TUM).

Ephesus represents an integrated heritage site owing to the reconstructions and displayed remains. The theatre is a cornerstone in this sequence, the Celsus Library and Curetes Street are the landmarks of the site (Figure 6.15).

Figure 6.15 At Ephesus the tourist groups along the ancient Curetes Street. In background the Meander plain landscape and in foreground the Celcus Library.

Vegetation

The archaeological landscape of Ephesus is mostly covered by the characteristic mosaic pattern of degraded maquis formations. The various extensive agricultural influences, as well as natural forces can be the results of these plant formations. However, in respect of this region, it is likely to say that the vegetation of antique period has not altered a lot comparing with today's vegetation (Gemici 1998: 156). The barely covered mountains indicate the typical vegetation type of the periphery. At the same time, the fertile Meander bay and the mild climax enable various plant species to use in suitable parts of the site.

Strongly devastated maquis formations with mantle communities and forb fringes, which have been under high grazing pressure, are able to spread and regenerate rapidly if protected (Kehl 1995: 1). This indicates the systematic relationship between human influence and the real dynamics of natural forces upon flora and fauna.

According to the research conducted on the site, native vegetation at the rocks and ruins in Ephesus are the following: *Campanula tomentosa, Umbilicus erectuc, Helichrysum stoechas, Phagnalon graecum, Inula heterolepis, Ptilostemon chamaepauce, Sedum caespitosum, Sedum rubens, Aurinia saxatilis* (Seçmen & Gemici 1999: 151).

Additionally, the region covers significant therapeutic, aromatic and economic plants known and used since two thousand years. These are: *Colchicum boissieri, Colchicum variegatum, Salvia fruticosa, Salvia pomifera, Mandrogora autumnalis, Urginea maritima, Ornithogalum spp., Pimpinella spp., Carthamus tinctorlus, Conium maculatum, Hyascyamus spp., Hypertcum spp., Delphinium staphisagria, Rhamnus spp., Crocus spp., Asphodelus aestivus, Isatis spp., Nigella spp., Amml visgana, Althaea officinalis, Valeriana dioscoridis, Rubia tinctorum, Lavandula stoechas, Convolvulus scammonia, Origanum spp., Glycyrrhiza glabra, Mentha spp., Narcissus tazetta, Melissa officinalis, Foenicluum*

vulgare, Orchis spp., Ophrys spp., Ruta chalepensis, Cyclamen spp., Rhus coriaria, Humulus lopulus, Ferula spp., Datura stramonium, Lilium candidum (Seçmen & Gemici 1999: 155).

It is also known that some plants were also cultivated for garden flowers as ornamental plants, for example *Campanula tomentosa*, commonly found as a fresco motive on the walls of Ephesus and Miletos, may point to the garden flowers in the ancient times. Although the site is covered almost entirely with limestone, marble and rocks, making them barren and dry in most cases, the localities are covered with fertile flat alluvial plains due to the deposition of sediments by the Grand Meander (*Büyük Menderes*) River.

Landscape design proposals

The planning framework considers Ephesus as the focal point for the wider landscape and its surroundings, regarding the outer part of archaeological site. In this sense, the immediate surroundings of the site should be precisely taken into consideration, and the focal points of the site will require a more detailed management plan as they are used most excessively. A large scaled land use is required to realize the future-oriented management of the natural and historical resources.

History of nature and landscape can be displayed by establishing a nature museum presenting examples of fauna and flora, in particular the wild animals (lion, tiger, wolf, cheetah, lynx etc.) and plants existed (economical, therapeutic or aromatic significances) in the past.

The place of temple of Artemis should be implied and stressed as one of the *Seven Wonders of the World* through displaying a model and planting with native species, in particular plants known to be used in the ancient times. This can enhance the historic character of the site with amenity values. It should be developed long-term radical solutions for the reduction of parking spaces and traffic use passing through the archaeological site.

Three main objectives can be summarized as the followings:

- Accessibility: The current entrances are situated in the north and south axes on the excavation area. The archaeological site should be enlarged to the north and south ancient gates to present the rest of the remains excavated on the site. As the size of the site enlarges, new routing trails should be opened to the public. The ancient tracing of the streets can be used for this purpose. The ancient street to the harbour area should be opened for the public creating another magnet point besides the Celcus Library. Above all, connecting the ancient city to the seacoast of Pamucak through the existing ancient canal could enhance the tourist attraction. Through the spatial development of a network of archaeological sites and monuments in a cultural-archaeological landscape zone, the historical significance of Ephesus can be associated with the neighbouring ancient cities as integral heritage attraction.

- Offering night visitations and tours in order to reduce the pressure at day time dispersing the number of tourist and use the advantage of night temperatures. Consequently, accommodation can be encouraged in the region.

- Planting: The archaeological site of Ephesus covers a large area including reconstructed monuments and excavated remains. The partially with maquis covered hills of Bülbül dağı and double-peaked Panayır dağı encompass the whole landscape in a wider scale. The site itself retains rich ancient structure. A whole reconstruction of planting is not convenient as the remains are closed to each other and this can lead to a dissonance in the physical appearance of the ancient setting. However the vacant areas can be designed in the manner of a sitting corner along the routes; eventually a modernised portico with seats or a small planted section as a “pocket park” designed in the manner of an ancient pattern. Such an area between the monuments enables the visitor to provide relaxation and protection from the sun, as well as to enhance the visual quality of the site and the spatial setting. The aim is not to create a green space fully planted in a manner of woodland, but to re-design or reconstruct the open spaces referring with the ancient structure. Reconstruction here means to use the ancient originated plant species, in particular local species in a practical interpretation. Therefore, the landscaping and planting should be regarded as part of this objective. These practices with their ephemeral characteristics can be changed anytime. The protection and interpretation of archaeological sites are processes of continuous dynamic development.

- Tourist facilities should be taken into consideration at the archaeological site. Simple but efficient design can enable the visitor to orient on the archaeological site. Services such as sitting facilities with shady places, waste baskets and information panels should be offered on the site where the archaeological material is not endangered (Figure 6.16). This helps to reduce the further impacts on the ancient materials through indirectly usage. The usage of pieces of archaeological remains for resting and other purposes can be a design concept at archaeological sites. The possibility of using the original material or a reconstruction of it should be discussed with the scientific team.

Recreational activities as such as trekking or cycling can be integrated to the regional activities. Particularly, rural activities such as trekking or cycling can be encouraged in the surroundings out of the core zone of archaeological sites in order to enhance the awareness and understanding of the ancient landscape. Integral spaces for rest and leisure should also be implemented outside the sites to reduce the excessive usage of archaeological sites.

Figure 6.16 Tourist facilities at Ephesus. WC is located on the right side of the planted avenue closed to the north entrance. The building is embedded into the landscape.

6.3 HIERAPOLIS-PAMUKKALE

Location

The archaeological site Hierapolis is located in the province of Denizli Pamukkale, 22 km northeast of the town on the northern side of the Çürüksu River valley, which is at this point some 6 km wide. The Çürüksu is a tributary of the Grand Meander (*Büyük Menderes*) River which passes through the western extension of the Taurus Mountains.

Pamukkale is situated on a plateau of 900.000 km² and has an altitude of c. 360 m. Beyond the archaeological site, Pamukkale possesses thermal water springs in which the water has healing properties. The landscape has been modified due to the hot thermal springs pouring down the hillside deposit calcium carbonate, which solidifies as travertine since ancient times (Figure 6.17).

Figure 6.17 View of travertine terraces at Hierapolis. In background the fertile Çürüksu (Lycus) valley.

The calcium carbonate in the stepped pools and terraces has the consistency of a soft gel at the outset (Madran 1992: 46). In order to protect this formation and the visual quality of the site, wandering on the terraces are partially forbidden.

The archaeological site of Hierapolis is connected to the main Denizli-Ankara highway by a 16 km asphalt road whose technical and geometric standards are not good (Madran 1992: 21). The site lies to the north-east of the plain Çürüksu, a branch of the Grand Meander (*Büyük Menderes*) River. Çürüksu is the biggest watercourse in the area. The archaeological site Hierapolis covers an area of 300 m x 3.000 m positioning in the east-west direction.

Historical and archaeological significance

The town was founded at the end of the 2 nd c. B.C., reaching the peak of its development under the Romans at the end of the 2 nd and the 3rd c. A.D. A major activity was the wool industry which benefited from the cleansing properties of the hot springs. The town became a bishopric in the 4th and 5th centuries. The layout of the ancient city that is visible today dates to the Flavian reconstruction of the city, following the disastrous earthquake of A.D. 60 during the reign of Nero (D´Andria 2001: 99).

Scientific research at Hierapolis began with a German team led by C. Humann (D´andria 2001: 97). Since 1922, with interruptions, Italian scholars have been carrying out research and excavation activities in Hierapolis.

In the last years, Turkish archaeologists of Museum of Pamukkale (Denizli) have begun excavations and restorations as well. Today the remains of Hierapolis, lying in an outstanding landscape of national and international significance, form a world-famous visiting attraction.

Pamukkale as World Heritage Site

Pamukkale-Hierapolis was inscribed on the World Heritage List in 1988. Since this time, the outstanding universal value of the Pamukkale-Hierapolis complex has been recognised by its inscription under the UNESCO World Heritage Convention. This has brought national, in particular regional aggrandisement and commercial advantage. But above all, it led to environmental awareness concerning the natural and cultural resources protection and planning their contemporary and future usages, and presentation as a cultural heritage park. Consequently, the first Pamukkale (Hierapolis) Preservation and Development Plan was drawn up to resolve the increasing problems in terms of protection and presentation in 1991. Following this plan the first implementations were carried out and a revision in need of the improving the planning strategies was conducted in the year of 2001 (Figure 6.18 and Figure 6.19).

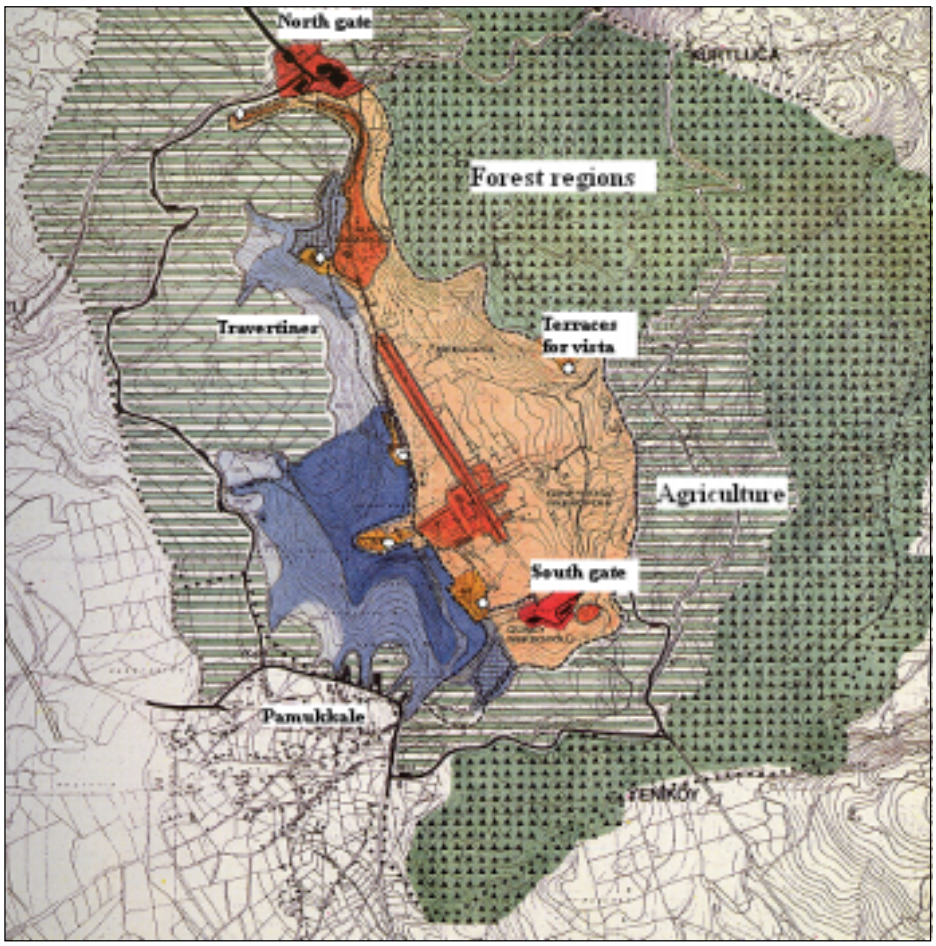

Figure 6.18 Master Plan 1/500 of Pamukkale-Hierapolis (A. Uzel and K. Türkoğlu 1991) (Madran *et al.* 1992). The protected archaeological areas are shown in the centre of the plan. The north-south axis of the archaeological site fit perfectly to the entrances on the layout. Travertines are divided into three main usages. The light marked zone encompasses travertine of which natural characteristics will be preserved. The darker zone indicates white travertine zones that are to be whitened. The solid lines mark the important archaeological monuments. Terraces for vista are pointed in different areas. The town of Pamukkale faces directly to the travertines.

The master plan covered these main options: Identifying the zones to be protected, new uses and their management, transportation access systems and visitor pathways, thermal water control and management, general visitor facilities. In master plan, the landscaping and vegetation were mentioned but detailed study was not conducted. In 2002, *The University of Pamukkale* prepared the landscaping plan for the recreational part of the site including thermal water control and management. The aim of the Master Plan is to expand the usage and functions of the cultural-archaeological landscape as well as to extend tourism activities outside the archaeological site, so that the impacts of tourism should not only be concentrated on the archaeological site. This can be considered as a conservation requirement with landscape aesthetics regarding the natural resources, namely travertine terraces and the vegetation. Nevertheless the landscaping plan and prospects exclude the archaeological area; it is rather focused on the travertine terraces located on the south of the site. In this respect, the recreational activities are restricted in the vicinity of the travertine terraces, and so the archaeological site is not integrated into the landscaping plan. As already mentioned; when the recreational planning options are

not articulated with the archaeological core zone, the integral conservation and management plan for the area will inevitably lead to the pathetic fallacy in the future development undertakings.

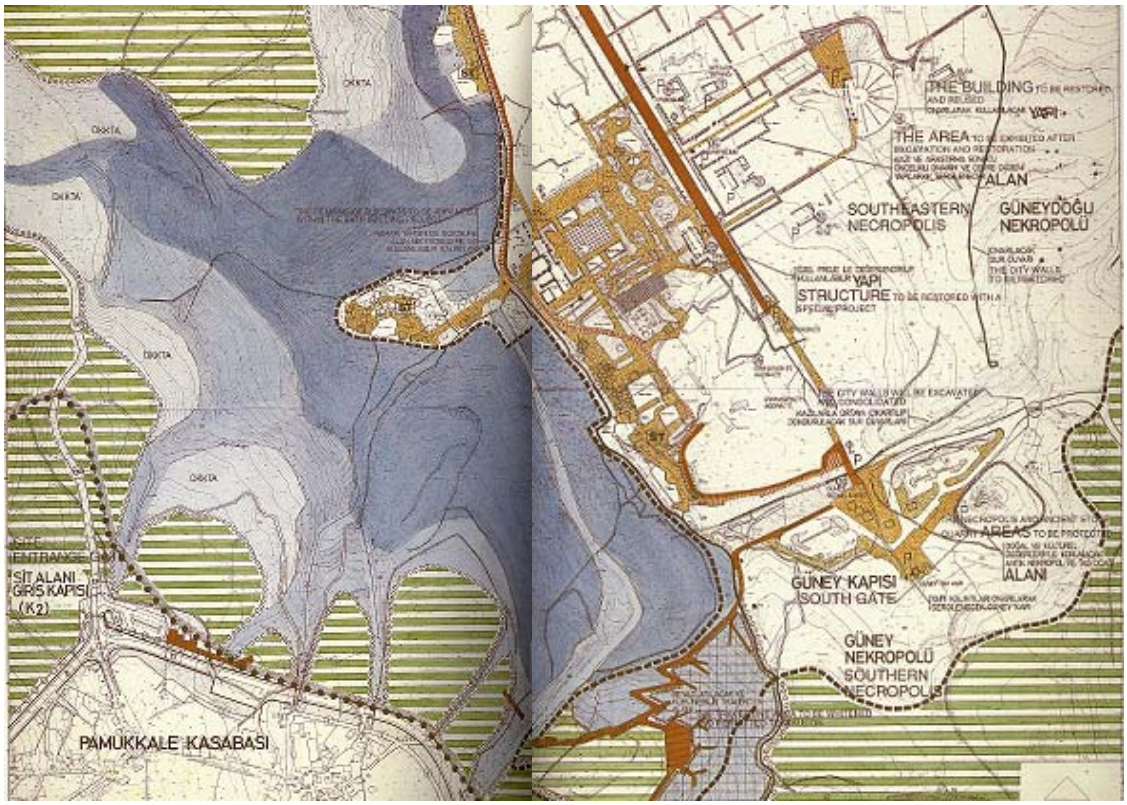

Figure 6.19 Pamukkale-Hierapolis archaeological and natural site preservation and development plan 1/1000 (A.Uzel and K. Türkoğlu 1991) (Madran *et al.* 1992).

Landscape features

Hierapolis is situated on a large, calcareous plateau, dominating the Lycus valley (present-day name is Çürüksu vadisi) to the west. The landscape is marked by the massive Honaz dağı (Mount Kadmos) to the south-east, by Baba dağı (Mount Salbakos) to the west, and by the presence of calcareous formations and basins that have given the name (Pamukkale; Cotton Castle) in Turkish.

The site has an altitude of around 500 m, rising to 1.840 m in the Çökelez mountains, to the immediate north of the park. Peaks further out but surrounding the park rise to 2.308 m (Babadağ) and 2.571 m (Honaz). The chief features of the site are its 20 m high travertine cliffs and waterfalls. The principal north-south axis of the urban grid corresponds to the ancient road that came from the Meander valley to the northwest, and, after crossing the plateau, continued toward the Lycus valley and the city of Laodicea to the south (D´Andria 2001: 99).

The travertine terraces lie along the foothills of the Çökelez Mountains, the highest being about 200 m above the Çürüksu plain and extending some 6 km between the villages of Pamukkale and Karahayıt (UNESCO WHS-Protected Areas Programme).

The archaeological site covers a large area with both visible and buried monuments and scattered ruins along the travertine terraces. The landscape of this rural area is marked by the impressive travertine terraces with basins filled with thermal water. These mineral-rich waters have dripped down over a series of terraced levels designing bizarre solidified cascades.

As the site encloses a large area, the particularly rich assemblage of archaeological sites perceived landscape view varies from travertine terraces to the archaeological site. These natural formations have exerted a considerable visual and cultural influence on the cultural landscape. However, both travertine terraces and archaeological site can be hardly observed on the site. An overview about the entire site with its natural and cultural resources can be best observed from the north and northeast hills on the site. Therefore the panorama terraces can be situated here.

Vegetation

From the standpoint of its physical geography, the site is placed on a transition zone influenced by the elements of Aegean, Central Anatolian, and Mediterranean climates. However, the plant cover shows the typical features of the Mediterranean climate with anthropogenic degraded maquis cover and woodlands. The typical forest vegetation involves *Pinus nigra, Pinus brutia, Cedrus libani, Juniperus*, deciduous trees like *Platanus, Fagus orientalis, Fraxinus excelsior*. The surrounding hills of the archaeological site are mostly covered with devastated maquis formations with phrygana, fringe of woodlands, and maquis clearings (Akalın *et al.* 1982: 2127).

Some of the phrygana plants are: *Fumaria densiflora, macrocarpa, parviflora, Cistus creticus, Euphorbia acanthothamnos, Genista acanthocloda, Erica.* Some maquis valuable for their appearance in terms of landscape architectural usage: *Spartium junceum* (yellow flowers), *Genista* (yellow flowers), *Cercis siliquastrum* (pink flowers), *Pistacia lentiscus, and Arbutus unedo*. There are also plant groups of *Acer cinerascens* and *Pistacia vera* (Leitner 1998: 16).

On the upper travertine terraces, the typical plant cover are; *Nerium oleander, Morus alba*, *Ficus carica* and diverse maquis scrub. Palm trees are also found around the thermal water pool mixed with aforementioned plant species.

The site, to a great extent, characterized by the travertine terraces, contains furthermore multifaceted aspects to present in terms of archaeological as well as environmental and tourism assets. The effort should be made to integrate the archaeological heritage with the natural landscape to create a cultural park. Furthermore, the site and its immediate vicinity are well-known for their health-cure oriented facilities as an essential tourism source for the region.

The existing plant cover includes *Phoenix dactylifera, Pinus nigra, Nerium oleander, Cupressus sempervirens, Ficus carica* and on the surrounding hills maquis scrub, heath and thickets. Adjacent to the Domitian gate of the main ancient street, so called colonnaded street, small-sized woodland of mostly *Cupressus sempervirens* appears planted to serve as a former picnic area screens the view between columns and barren

hills with their dense and dark foliage structure.

The rest of the site among the ruins of Hierapolis appears to be barren and remained untouched. The extending area to the northeast has been planted with trees alike which is prosecuted in harmony with the archaeological area.

On the site, specific trees and shrubs which are tolerant of calcareous soil and are native to the region should be preferred as they tend to tolerate the poor maintenance and hardy conditions. Some of them are: *Acer campestre, Acacia cynanophylla, Cercis siliquastrum, Berberis, Cornus alba, Cupressus sempervirens, Crataegus prunifolia, Berberis buxilolia, Buxus sempervirens, Nerium oleander, Daphne mezereum, Genista pilosa, Morus alba, Quercus coccifera, Spartium junceum*, *Pinus brutia, Pinus halepensis, Pinus nigra var. nigra* and *Thuja occidentalis.*

Watering is a common issue at archaeological sites. As the thermal water is not appropriate to water the planted areas, a specific water supply should be provided for the site. For this purpose, water purification plant was established. In addition, an irrigation system can be conducted through reconstruction of ancient pipes to use clear water for watering and monumental pools as well. This is also one of the aims D´Andria (2000)[41] has stated in his short report about the archaeological undertakings in Hierapolis for the next five years. In this respect, a skilful reconstruction may be more authentic here than scattered remnant relics.

Landscape design proposals

The layout of archaeological landscape can be divided into three parts: The first part encompasses the south entrance continuing along the south-north axis encompassing the necropolis as the main entrance, the second part is the main archaeological buildings and thermal water pool, the focal area and the last part covers the travertine terraces facing east to the village Pamukkale; recreational area. As shown in Figure 6.20, these three landscape components interrelate with each other, and whilst they reveal various features requiring different planning options from the standpoint of landscaping and conservation-presentation.

The area around the museum within the Roman Bath complex can be designed systematically in a manner of ancient open space with partly contemporary landscape elements. In order to give the sense of antiquity, formal planted garden beds with shrubs and trees can be proposed combining contemporary materials for seating, litter bins, and paving for the visitor amenities. In broad terms, design strategies in outdoor furniture are of essential importance in landscape appearance, even though they are relatively small in scale but tend to be present in large numbers.

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[41] Throughout the interview in Pamukkale (August 2003) Prof. Dr. Francesco D´Andria kindly gave a copy of his short report about current achievements and future goals of archaeological research in Hierapolis between 2000-2005 which he prepaid for the Ministry of Culture Turkey, Ankara (Hierapolis Kazıları: 2000-2005 yılları arasında yapılacak çalışmaların özeti)

On the archaeological sites, it should be ensured that there is design continuity, or at least design sympathy, between the landscapes. Originality and uniqueness as well as homogeneity on the site are required to reinforce the unity and aesthetic appearance within the landscape or else they can emerge as a disruptive element in the landscape.

Limestone and marble – two materials most commonly used throughout the ancient city of Hierapolis, can be re-adapted in furnishing the open areas, in particular for the sitting areas and around the reconstructions. Contrarily, contemporary approach of design lines can be proposed using contemporary and traditional materials. They provide flexibility in constructions and do not impede the ancient fundaments and remains under earth. The effect is quite remarkable, if the design provides to link the different periods combined with information purposes. Unlike the modern constructions relatively alien to the environments such as protection houses and roofing constructions on the sites, such undertakings with plant components do not obtrude on the landscape and they reinforce the presentation of the site. In the course of landscaping, the existing car street should be removed and consequently car park should be located at the entrances. A similar landscaping design pattern can be applied around the Roman Theatre.

In broad terms, circulation routes are required to orient the visitor in a specific concept as well as to minimise impacts on the integrity and physical fabric of the place.

Around the whole core zone, existing maquis scrub and thicket should be preserved as a natural character of the region. Additionally, grazing should be restricted through very low livestock levels to reduce the risk of erosion of archaeological site and regeneration of plant cover. The eastern hills on the site can be planted to prevent travertine and heritage pollution caused by dust.

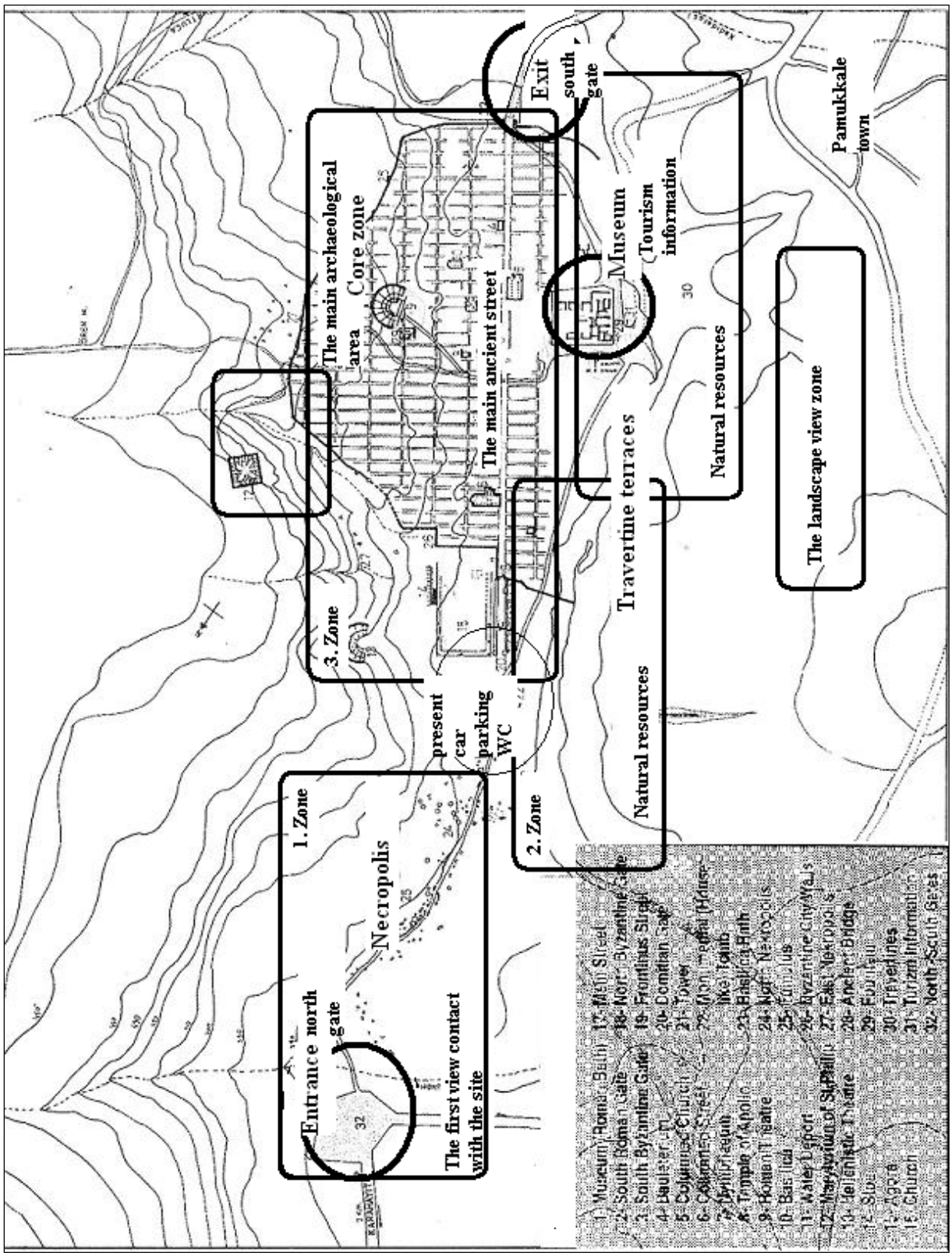

Figure 6.20 The location of archaeological site of Hierapolis (After D´Andria & Silvestrelli 2000: 168). The zoning illustrates three main parts on the site. The natural and cultural resources are integrated. The entrances are of essential importance as they should serve the main visitor facilities such as car parking, tourism information, shops and catering facilities. The present tourism information is located near the museum which is restructured from the roman bath remains. The road between the north gate along the Necropolis leads to the contemporary car parking which is located on the ancient remains. As the main archaeological area covers a wider zone, the visitor routes should be linked with the main ancient street.

- **1st Zone: The north gate and the Necropolis**

The first zone is the north gate and the Necropolis where the first impression of the archaeological site begins at the entrance during the gate. Therefore the entrance of the site plays a key role for the visitor in perceiving and interpreting the archaeological landscape of the site. Here it is the "*landscape of death*" (Georgiadis 2003: 31) that should be emphasized in presenting and interpreting process (Figure 6.21). The existing road from the north gate leading to the car park and museum divides the necropolis into two parts and impacts the visual unity and spatial harmony of the cultural and natural heritage. Therefore, one of the key objectives should be the removal of the traffic road and encourage the visitors to walk on the ancient lane through the necropolis by terminating the traffic road at the entrances, whilst conserving and protecting the archaeological heritage.

The aim is to provide an appropriate setting for Pamukkale and its associated monuments within a cultural park. In addition, the north and south entrance gates should provide essential tourist facilities including information centre, catering, post, souvenir shops.

Figure 6.21 The ruins of Necropolis at Hierapolis.

The landscape encompasses the archaeological heritage, travertine terraces and the maquis scrub. Due to the intense consistence of calcareous compounds in the soil, the site does not allocate agriculture practices and a diverse flora (Soner 2000: 65). The area of necropolis is almost barren in summer, although the native vegetation around the region possesses its own character. The dominating plant cover includes maquis such as *Quercus* (oak), scattered *Pirus elaeagnifolia* (wild pear), *Laurus nobilis* (laurel), *Pistacia terebinthus*, *Cistus* (rock rose) and *Rubus spp*. (blackberry). The situation implies the degraded plant cover around the remains due to the lack of supervision of a route and consequently if in the antiquity, there was a specific planting pattern and related species practised on the necropolis, it could be intended to reconstruct it here.

Such a study could be carried out in consultation with the palaeobotanists and environtalists to identify the plant species and their location. Besides, plant and leaf motives as ornaments on the sarcophagi can attribute to the plants used in the antiquity and associated with sacred characters and the related themes. In this sense, according to the research of Yıldız & Şimşek (2000) on sarcophagi in Hierapolis and its environs, motives of palms and their leaves, and acanthus flower leaves are seen in the compositions. Taking into consideration to protect the inter-visibility between travertine terraces and the ruins of necropolis, the dense of planting should not screen the landscape.

Nevertheless, as it is not known exactly which plants were used, so another approach can be proposed to interpret the local and traditional planting patterns on the historical and modern cemeteries.

Cupressus sempervirens, Daphne mezereum, Populus alba "pyramidalis", Laurus nobilis, Berberis buxifolia "nana", Rosmarinus lavendulaceus are some of the plants which can be used for planting between the sarcophagi and the pathway.

In broader aspect link of walking routes with an archaeological storyline for attractive views and presentation purposes can be integrated to the necropolis in order to provide a spatial framework throughout the archaeological site.

- **2nd Zone: The travertine terraces**

The second zone composes the travertine terraces referring to the recreational activities and amenities. The travertine terraces are about 50 m in height and 3 km long. The terraces encompass an imposing view, in particular at the edge of the travertine terraces tourist facilities and vista points can be proposed in contemporary design patterns. Middle sized trees and shrubs are convenient in planting the area, however it is of essential importance that the plant groups do not screen the view between archaeological zone and terraces, as the archaeological heritage is to be interpreted as an integral part of the wider landscape (Figure 6.22). Plant fragments such as *Nerium oleander, Morus alba*, and *Ficus carica* are the main plants growing wildly near or in the terraces. As a focal landscape feature on the site, travertine terraces and water are essential components of the archaeological heritage since antiquity, as a fact that the great monuments of fountains and pools in the city of ancient Hierapolis imply the importance of water as an amenity aspect in the antiquity.

Unlike this aspect, green areas and parks had not emerged in the ancient Hierapolis, for one reason is that the calcareous soil and the dense structural plan of the city. Consequently, water and associated monuments have played an important role in shaping the public places as focal elements in the city landscape.

Figure 6.22 At Hierapolis archaeological landscape encompasses the travertine terraces, archaeological remains and natural vegetation.

- **3rd Zone: The main archaeological area**

The third zone covers the core area on the archaeological site. Here, the ancient road on the north-south axis coming from Meander valley crosses the plateau and Lycus valley, and continues towards the city of Laodicea which is located on the low hills on the southern side of the Çürüksu valley, a city that was closely associated with Hierapolis in the antiquity (Madran 1992: 22). This part is considered as the focal periphery for archaeological landscape, therefore the archaeological monuments and remains should be considered as the main features to display in a cultural landscape. As the remains of archaeological buildings are scattered all over the site, the perception of the complete ancient city is quite complicated. Restored major buildings serve as landmarks on the site to provide the orientation for the visitor.

The ancient main street, adjacent monuments and their remains are the key elements for presentation through the routing on the site. The buildings of major importance include the theatre, octagonus, monumental gate, nymphaeum and the necropolis (Figure 6.23). To add the sense of timeless, whilst reducing the sense of isolation, the site presentation should facilitate and encourage the dialogue between ancient heritage and visitor interest about the importance of the place and its fragile nature within the landscape. At the present the asphalt road between north and south entrances enlarges in the focal area for pedestrian and vehicular traffic and as parking lots. Furthermore, this road leads to the theatre and thence to the district Ören Mahallesi passing through the archaeological remains; Apollo sanctuary among the others in the southeast of the site. One of the main objectives should be to redesign this area, as the parking lot covers a huge space closed to the museum and along with the archaeological heritage, which should be converted to its previous appearance and integrated within the cultural heritage.

Figure 6.23 View of the Frontinus Gate on the street of Frontinus. In background of the columns, the row of Cypresses is seen.

The theatre and the ruins of bath complex which is partially reconstructed and used as museum are the most visited heritage buildings on the site (Figure 6.24). As a consequence, the surroundings of these two buildings should be reinstated where possible through the clearance of unrelated elements, remains and scrubs. However, the visitor interest should be drawn to the other remains on the site to reduce the visitor pressure. Due to the intricate and scattered appearance of heritage remains, visitor can hardly convey important sacred and civil establishments on the site. Moreover, the ancient city layout is not recognizable as well as the accessibility is not efficient to interpret consequent spatial, structural and intangible values.

Figure 6.24 View of the garden of museum. On the left side; the archaeological exponents are displayed. On the right side; the entrance of the museum with seats and plant arrangements.

The thermal pool located on the archaeological remains, managed by the municipality of Pamukkale, is an essential tourist facility (Figure 6.25). Due to the legal restrictions conducted in the preservation and development plan 1992-1993, the hotels on the

archaeological sites were removed. In doing so, it was aimed not only to provide the thermal spring water for whitening the terraces without having first gone through hotels, but also to protect the archaeological substance (Madran 1992).

Figure 6.25 The public bath is used for its therapeutic features and it is very popular as a tourist attraction.

Summary

In this chapter, landscape planning and presentation proposals were illustrated by means of case study sites Pergamon, Ephesus and Hierapolis. The sites were defined according to the landscape qualities including topography, vegetation as well as architectural aesthetics and archaeological value.

The ancient site of Pergamon is the first case study due to its location and association with the modern city of Bergama. Visitors approaching to Bergama by car immediately notice the ruins of Acropolis. Along the typical rural landscape of the region the archaeological ruins reveal dispersed on the Acropolis, in the city and its surroundings. In the case of Bergama, an attempt for reconstructing planting design of a garden or around a temple is very difficult, although it is assumed that the Aegean climate has not changed much its character since antiquity. In this case, it can be proposed to use local plants associated with ancient plant knowledge in the region. Partly replanting of the archaeological landscape including presentation of fictive ancient gardens can reinforce the reconstructions in terms of visual and amenity aspects. However the visual character of the site is sensitive and the interventions should not change its historic value. Therefore, planting is intended to be an additional element, but not a replacement for an archaeological finding. It is of essential importance to enhance and protect the visual sensitivity of the key monuments and their setting.

Second case study, Ephesus, is a well-known archaeological site and so it is one of the most visited archaeological sites in the west coast of Turkey. Inevitably, the mass tourism impacts the archaeological and visual values of the site. The archaeological site of

Ephesus represents strong amenity aspect as a tourism magnet due to the reconstructions. The history of topographical changes plays an important role in the history of Ephesus. This should be taken attention in presentation strategies also. So, in the case of Ephesus, the contemporary values, such as tourism and amenity aspect, can be combined with the archaeological and historical significance of the site and its environment. Due to the intense visitation, it is proposed planning the organization of the site including alternative tracing options and spaces to divert and disperse the visitor gatherings. The extension of the site to the ancient harbour can enable the visitor to focus on the landscape.

The last case study, Pamukkale and the archaeological site of Hierapolis is a complex site with different aspects of intrinsic physical and spatial assets involved. The site possesses high degree of landscape features; in particular geological formations, which should be considered as one of the key approaches in conservation and presentation of the cultural and natural resources. However the diversity of natural and cultural heritage brings various problems in conserving and presenting the natural and cultural resources as well as the management of the site including tourism. Landscaping on the site is a prerequisite to provide an appropriate circulation and routing in terms of pedestrian paths and visitor facilities. The intention will be to make a greater proportion of the wider landscape available for access. Where possible, focus elements will be emphasized through landscape design patterns and reconstructions. Water as the main landscape element and natural resource should be reused, eventually in the form of antiquity, namely monumental fountains and pools such as reconstruction of the nymphaeum. Around the focal monuments, it can be proposed to reconstruct open areas or courtyards by means of ancient planting. This minimises using the monuments directly, where they are vulnerable to damage.

In general, plants should be selected from native vegetation as they are relied upon for their hardiness, tolerance and successful establishment. The existing maquis scrub, shrubs and trees should be preserved and encouraged to be developed through re-plantation and controlled grazing measures. In view of this approach; plants associated with mythological elements as well as species revealed through paleobotanical researches can be displayed. Above all, native Mediterranean shrubs and trees can be used in between the remains.

In each case study, it is aimed that the visitors wish to extend their day-trips by a visit to the city centre which will reinforce the city’s own economy.

7 CONCLUSION

In recent years, the terms heritage preservation and cultural landscapes including natural and cultural resources have been interwoven under the multifunctional concept of “archaeological heritage conservation and management”. Archaeological sites as components of cultural landscapes draw attention not only through the presentation of evidences of past cultural forms but also through their amenity and leisure aspects as regards tourism. Archaeological sites at present day can not be solely assessed as scientifically research fields due to the increasing public interest and tourism which has widened the scope of archaeological sites. This indicates that cultural-archaeological sites and landscapes are an essential component of a living environment where they had functioned once as working ancient landscapes.

Both landscape and life-way are now modified of course, not least by economics and tourism, but, conditioned by the basics of climate, geology and sea, they continue to represent a distinct culture resulting from the long term interaction of people and that particular combination of environmental factors in that particular place (Fowler & Jacques 1995: 352). I tend to use tourism as a function for archaeological sites but not an aim for the design objectives. Besides tourism, developed in the recent years as an inevitable activity of historically significant places should not be considered as a threat; it is revealed from the idea of heritage presentation and even conservation. Not least, tourism leads to the awareness of archaeological heritage and rural landscapes.

In many cases, however, archaeological sites and monuments accessible for the public are considered as relict scenery in a departed landscape. For this reason, the concept of landscape planning, plant usage and contemporary design principles have received little attention from scientific environments. In fact, this process should be involved in the archaeological research projects and institutional frameworks, in which landscape architects should also involve to the project team collaborating with participating disciplines. Under the perspectives of all these aspects I have intended to bring this subject into light in terms of cultural landscapes, heritage design and planning.

Archaeological sites are unique and non-renewable places with cultural and natural components and their associated values. They are formed and evaluated through these values in their landscape setting. Additionally, they are valuable for their role in education, leisure and tourism. Apart from tourism there are other recreational activities emerging from natural and cultural resources and their values. In this respect, cultural heritage is not the domain of archaeological activities alone; thus cultural heritage studies can not be seen from the sole perspective of archaeology. The rising demand for historical spaces for leisure seems likely to continue. Therefore, this thesis has attempted to broaden the discussion by regarding the landscaping and landscape design as an integral option for the cultural heritage framework. This includes particularly activities carried out in nature and visitation of the ancient heritage. In this sense, heritage sites and their settings are part of a settled and utilised landscape.

From the evolutionary point of view, the three main factors are involved in this process:

- Landscape dynamics and archaeological physical setting,
- Values and symbols in the historical-cultural landscape,
- Concept of presentation and site design.

To provide all these purposes, the sites should be appropriately accessible and presentable for the public. However, this can bring serious problems in conserving the sites and lessening the visual values due to the pressures of all kinds of use. Inevitably, the uses of sites bring specific spatial organizations. These are access systems such as links, routing, walking paths and sitting spaces as well as car parking and primary tourist facilities. As an example any hard surfacing such as pitching should be carefully designed to blend with the landscape and the underlying surface. In this respect, it is recognized that archaeological sites as components of cultural landscapes, require adaptable measures as a means for dealing all the issues affecting these generally complex sites.

In recent years, the concepts of preservation, maintenance and presentation of cultural heritage sites were combined to the archaeological resource management concept which has aimed the sustainability of the cultural and natural resources for the future. The management plans provide the means for establishing an appropriate balance between the needs of conservation, access, sustainable economic development and the interests of the local community. However, the strict planning controls placed in many local authorities severely restrict the positive development and contemporary adaptations. The concept of heritage usage is now an accepted part of urban planning in most developed countries. This is a reflection of the wide spread interest in the past and ways in which it is viewed, used and changed (Larkham 1995: 91). Legislative measures normally secure the preservation of archaeological sites against the act of destruction, but they can not halt natural decay. To prevent that, positive management is needed (Macinnes & Wickham-Jones 1992: 8).

Landscape design and planning on archaeological sites are initially connected with the understanding and interpretation of the cultural landscape as well as protection of its natural values. The empirical research has concluded that archaeological sites are closely associated with the landscape formation as the survival of remains has affected more recent use of landscape. According to the discourse presentation helps providing the communication between scientific research and popular public use. For this reason, planning is a tool to provide all these aims through establishing a framework concept and to prevent their inappropriate use. The aim refers to the holistic approach; it is not only to protect a piece of archaeological site, but to enhance and value precisely the archaeological landscape.

Due to the preserved natural setting on and around the sites, the landscape contains mosaics of locally distinctive species and habitats extending into the far distance. The archaeological values overlap with the natural environment and so the archaeological landscape reveals in its characteristic setting.

As far as possible, proposals for the conservation of natural habitats should be integrated with those for conservation the historic environment. Where possible, re-plantations respecting the visual unity and archaeological heritage can be carried out within the site. The physical appearance of the site is a powerful tool in interpretation and presentation to enhance the visitor's experience and perception. Such complex landscapes can be interpreted and presented in different ways.

In the forth chapter, I have developed the typology of presentation types to illustrate the general situation and possible presentation forms of archaeological sites. The intrinsic properties of a place require an integrated and sensitive plan approach. The values and qualities of heritage determine the options of preservation and presentation. Table 7.1 shows the interrelations between values, usages and presentation forms. The evaluation of the archaeological landscape is set up to determine the usages within the heritage. Usages (aims) vary according to the qualities and forms of the natural and cultural resources. Similarly presentation form is dependable on the types of usages (aims). Typology of presentation indicates that each presentation model encompass more than one usages regarding the intrinsic and re-created qualities.

Table 7.1 The interrelations between three components of landscape design and planning.

VALUES	USAGES (AIMS)	PRESENTATION FORMS	
• Topography • Landscape resources • Historical components • State of ruins • Vegetation • Ecology • History • Archaeology	• Research • Tourism • Education • Conservation	• Interpretative presentation • Purist presentation • Imaginary presentation • Archaeological network • Park-like presentation	**LANDSCAPE DESIGN and PLANNING**

As natural and archaeological resources constitute the archaeological landscape, vegetation and planting patterns on the sites should be thoroughly examined. In landscape planning and design plants are one of the main components. From the beginning of the thesis, I have discussed to find out the possibility of reconstruction of the planting patterns on the archaeological sites corresponding with the archaeological conserved built environment. Regardless of the historical authenticity which, in this case, almost impossible to envisage, the replanting of the sites can be carried out in various options. It is of essential to consider the site as an integral of the cultural landscape. As the Greek architect Pikionis (see Chapter 5, p. 117) designed the Acropolis, he paid attention to the form and nature of the environment, tradition and the landscape.

These aspects inspired his work on the archaeological site. Similarly, these three main factors can enable the landscape to redesign regarding the interrelations and aesthetics of the environment and the archaeological heritage. It helps to enhance and conserve the landscape character of the heritage sites with respect to tree cover and other planted features. Additionally, scientific methods of palaeobotany and environmental archaeology help providing valuable hints about the past vegetation cover and enable the plant patterns to reconstruct.

The concrete cases in the forth and sixth chapter have illustrated that archaeological sites have various plant species and topographical properties which bring different problems and procedures. The discourse has shown that natural plant cover of an archaeological site is generally removed during and after the excavations and the ecological aspects are not appreciated. Throughout the design proposals, I have intended to integrate the archaeological resource into its associated landscape respecting the conservation measures. Moreover, it was aimed to use the natural resources including planting and landscaping the site without archaeological reconstructions. I adjoin this to the local vegetation, contemporary planting patterns as well as traditional and social values. So, the reconstruction of ancient open areas can be considered as an approach in landscaping the sites.

Although it is not easy to find out or reconstruct the exact appearance, it is possible to create the spatial layout by examining the elements of the surrounding landscape and suggest planning and design patterns that might have been of particular similarity. In doing so, the scale and setting of the site can be better interpreted and consequently it can be perceived by the visitor. Furthermore, it can enhance and protect the visual sensitivity of the key monuments and their setting. The main intention is to retain the character of the archaeological area and its landscape as well as to provide an appropriate physical setting for the protection and maintenance of the site. Although eroded through the passage of time, the remains and their setting still remains in the landscape; the reconstruction of heritage retains minimal and largely conservation oriented ensuring that their unique significance is not impaired for the future generations.

The main values are indicated (intrinsic and marker qualities) on the site and the environs. The results of the case studies have shown that the first case study site Ephesus contains its aesthetic values regarding the architecture of free standing remains, reconstructions and the sense of spatiality. The landscape covers the “visual envelope” within the site itself so that the archaeological site perspective extends in the archaeological zone whereas landscapes of case studies Pergamon and Hierapolis widen in the remote distance covering the vicinities. Figure 7.1 shows the visual differences between the archaeological sites. Ephesus has a closed landscape, whereas Pergamon possesses interrelated visibility between the modern city of Bergama and the other archaeological sites. Hierapolis is visualized from the main street and the town of Pamukkale.

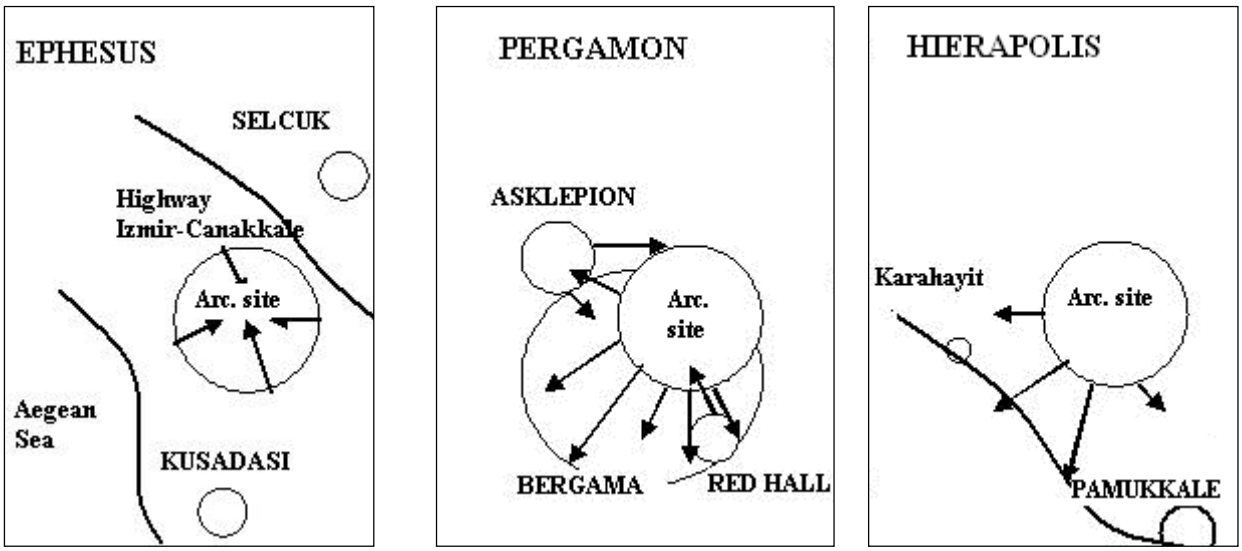

Figure 7.1 The visual integrity and interrelations between archaeological sites and their vicinity.

The main conclusion of this study is that the archaeological sites are recognized to be integral parts of the complex and layered cultural landscape rich in both heritage and contemporary values, and the landscaping and planning represents a highly developed, thoroughly consultative and the system of value-based conservation. The presentation types encompass various forms of values and resource significances, and their implementation is based on the partnership. It is by no means an ended planning activity; it explicitly calls for the dynamic, future-oriented planning objectives. The main goal is to enhance the cultural-archaeological landscape and to protect the cultural material as well as the natural resources in the contemporary values. It is of essential that the solution for an appropriate heritage management is not to stop its re-usage but to strengthen the conservation by creating a better environment for the cultural and natural resources. The visually and historically sensitive landscape can be enhanced by reconstruction of the plant environment or by creating a new planting solution with a sophisticated tourist appeal.

Today, the understanding these elements in their context is required and the management of the landscape incorporates integration. Therefore, the task should be to consider the relationship between the conservation and the presentation of ancient buildings, the preservation of landscape as well as creation of leisure activities. This requires the development of a dynamic view of nature, based on historical perspective, and beyond this some breaking down of existing disciplinary boundaries and attitudes (Kristiansen 1992: 58). Balancing management of cultural resources, ecology and heritage conservation is an important task in terms of sustainability which should meet a new form of institutional and constitutional framework; otherwise the conflicts will continue to arise.

The new approach shifts the emphasis away from the present fixed conservation measures to the dynamic management and design of contemporary archaeological heritage landscape which recognizes the cultural landscape with its plant cover, soil and archaeological remains as well as the demands and social values of the modern societies. It is recognized that such measures require contributions of different disciplines. It needs

to be extensive discussion and consultation among the broad archaeological and academic community with an interest in archaeological sites.

Finally, this dissertation aims to make a contribution towards landscape studies and cultural resource management in terms of landscape architectural design principals. It is recognized that the historical sites are essential parts of contemporary recreation options. Hence, the collaborative scheme seems well suited to the resources and their setting. In this, the landscape architect can be catalyst to balance the architecture and nature. This can only achieved by the profession of landscape architecture, being an integral part of the archaeological heritage studies.

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