Urban Conservation and Sustainability
A Historic Centre

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ABSTRACT: The commonly accepted definition of sustainable development derives from the 1987 “Brundtland Report” and states that it is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The definition, however multi-faceted, has an emphasis on conservation without the exclusion of development. This paper is concerned with the concept of urban conservation in relation to that of sustainable development. It identifies their common elements and shows that the use of conservation policies can provide the framework for the upgrading and enhancement of existing urban environments without forbidding sustainable development. For this purpose a case study of the historic centre of Athens, which is currently undergoing major changes, has been undertaken. The unification of 1,500,000 square metres of archaeological sites (incorporating ancient monuments, green and public spaces) is achieved by a network of pedestrian routes and surrounded by housing, mixed use, commercial and neglected areas. Its level of success, together with the effects on the urban form, is assessed in terms of sustainability.

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INTRODUCTION AND BACKGROUND

Fig 1. Views of Athens from the Acropolis Hill

The Athens metropolitan region (Fig.1) has 3,523,000 inhabitants approximately, 933,015 (1991) of which are situated in the city centre. The rapid population increase throughout the 20th century, the geographical position, topography and lack of comprehensive land and conservation policies contributed to the profound change in the size of the city, resource / land uses and the environment. Following years of debate and past efforts to establish a unified regional plan, in 1985 the Hellenic Parliament passed law L.1515/85 - the Structural Plan and Environmental Protection Programme of the Greater Athens Region (Fig.2) - an instrument of law which sets out the policy, general directions, measures and planning framework for sustainable development. Article 3 of L.1515/85 depicts among others the promotion, protection and conservation of the historical character of Athens and upgrading of the city centre. Structural Plan policy is implemented by General Urban Plans that deal with the requirements of each municipality.

The Athens General Urban Plan (Fig.3) includes in its specificity, upgrading of central Athens (Fig.4), re-organization of land uses, rehabilitation of residential areas, the development of pedestrian networks, the increase of green areas, conservation and unification of existing open and green spaces, renovation in traditional neighbourhoods, and the unification of archaeological sites incorporating ancient monuments, green and public spaces.
The concept behind the unification of the archaeological sites is not new. Before its inclusion in the Structural Plan, the idea of a 'cultural park' was conceived in order to emphasize the cultural character of the city. In this and the Structural Plan's context, the ministries for Culture and the Environment / Physical Planning / Public Works developed a joint programme of public works in order deal with the different aspects of such an undertaking. In 1998 they appointed an agency (EAXA S.A) to implement numerous developments of variable size and nature but all of equal importance to the whole. Projects and modifications to the urban environment include pedestrianisation of major traffic routes, development of pedestrian networks in traditional areas, conservation of buildings/sites, land use studies, rehabilitation of public spaces. Within the agency’s project framework certain works have already been implemented, some are in the process of implementation and others are part of a long-term programme.

2. THE UNIFICATION

2.1 Sites

The archaeological sites, which include the Olympieion, Philopappos, the northern and southern areas of the Acropolis, the Roman and Ancient Agoraes, Hadrian’s Library and the Keramikos ancient cemetery (Fig.5a), influence and are also influenced by their surroundings. In the past, inappropriate land uses in their vicinity, degeneration of the urban fabric, increasing numbers of visitors, non-integration into the daily activities of their neighbourhoods together with the much-publicized environmental problems, created a somewhat hostile and fragmented urban environment. Today, their unification has been achieved by the pedestrianisation of two major traffic routes (Fig.5b).

2.2 Pedestrian Networks

Dionysiou Aeropagitou and Apostolou Pavlou Streets (Fig.5b) are located in the historic centre between the Philopappou and Acropolis Hills, converging at their meeting point and bordering to the west with the residential districts of Makrigianni and Thesion and to the east with the district of Plaka (Fig.5c). Their total length is approximately 1,600m. The streets were plagued with heavy traffic especially during peak hours (Fig.6a&b), estimated average noise levels ranged between 75-81dB(A) for D. Aeropagitou, and 78-81dB(A) for A. Pavlou while atmospheric pollution reached very high levels (i.e. CO 283 Kg/h etc) [3].

Works started in 2001 and the pedestrianisation was done in stages while accommodating the area’s requirements such as circulation/traffic adjustments, provision of alternative parking, loading and unloading, demolitions and excavations. Interventions along both sides of the streets included soft and hard landscaping, remodelling of open spaces and restoration of four building facades. The strengthening of green networks in spaces between the archaeological sites and the city occurred by the introduction of rows of trees along the pedestrian route (Fig.7)[5]. These were also used as the connecting elements between small open spaces and green areas.
Upon completion of the project (end of 2003), a major part of the unification programme had been achieved. Not only did the new pedestrian path unify the desirable sites but also brought together previously separated residential districts by connecting into their existing pedestrian networks, while linking together the new Acropolis Metro Station (located at the bottom end of D. Aeropagitou) with the Thesion Light Railway Station at the far end of A. Pavlou (Fig.5b).

The new pedestrian path can be seen then as an “urban corridor” linking various elements together, providing accessibility and ease of movement. Additionally, the route has retained part of the historic memory of the ancient pedestrian network by depicting wherever possible its location (Fig.8). It has also provided morphological continuation to a previously chaotic area, reduced noise and pollution by the removal of vehicles (access is allowed for emergencies), increased pedestrian movement giving the possibility to people to stop and take in the surroundings (Fig.9).

Iraklidon Street (500m length) is located in the heart of the Thesion district (Fig.10a&b). Its pedestrianisation has provided the area with more walkable space, reduction in noise and atmospheric pollution. This intervention is part of an extensive effort to calm urban traffic, restrict car access while making car-parking provisions for the residential population. The addition of Iraklidon St. to the small local pedestrian network, coupled with its A. Pavlou junction has increased pedestrian movement, provided physical continuity with better, safer access to its surroundings.

The pedestrianisation of Adrianou Street (Fig.11a&b), which was plagued with cars and similar environmental conditions as A. Pavlou Street, has provided a needed, serene and walkable public space next to the archaeological sites and border with the Thesion district. Its junction with the pedestrianised A. Pavlou signals entrance to the Plaka. The street (215m length) borders with the ancient Agora site to the west and a row of 1-3 storeys high buildings to the east. Local residents and visitors due to its location, beautiful views, cafeterias / restaurants, and proximity to the partially submerged Thesion railway station now favour it.

2.3 The Districts

Thesion has been a predominantly residential area since its development in the 19th century. It is located in the historic centre, close to the ancient Agora and the Acropolis. The district is sandwiched between the Thesion railway station lines, Philoppapos Hill and the pedestrianised A. Pavlou Street (Fig.12a&b). It covers an area of about 28.4 hectares (excluding a part outside the historic centre) of which 45% is public space (18.5% of green space included). National statistics have identified a population of 6,084 inhabitants (1991) [3] and a density of 214 persons per hectare.

Most buildings are predominantly 1-3 storeys high. Land uses in the area include residential 83.6%, recreational 1.3%, commercial 5.6%, office 1.9%, parking 1.8% [6]. Thesion Square and its entrance to the Agora were separated from the rest of the district due to the A. Pavlou Street. Heavy traffic during peak hours brought with it high levels of noise and atmospheric pollution. By 1991, there was a population reduction of 21.4% (1981 pop. 7,740) [3] mainly due to households relocating to the suburbs in search of better conditions.
Not surprisingly similar environmental conditions apply to the small but near by residential district of Makrigianni which is located in the historic centre, to the south of Philopappos Hill and bordering with the pedestrianised A. Aeropagitou (Fig.5c). The district is in the process of land use changes, partial demolitions and the building of the new Acropolis museum, hence outside the scope of this research. National statistics have identified a population of 4,511 inhabitants (1991) and a density of 199 persons per hectare. By 1991, there was a population reduction of 18.6% (1981 pop. 5,544) [3].

Recent projects include: Thesion Square is triangular with an area of 31m². It is located to the northwestern side of the ancient Agora (Fig.13&14), next to A. Pavlou’s pedestrian route and opposite the pedestrianised Iraklidon Street. It is an intermediate space between the old and new city. The landscaping scheme to be implemented emphasizes this characteristic by using hard materials on the areas accessed by pedestrians and soft materials where it is connected to the Agora [5]. The square has great views of the ancient sites and provides access to them. The trace of an ancient road that starts form the Agora, passes through the square and continues into Iraklidon Street will be marked on the new surface. Existing trees will be retained while more will be planted near the entrance to the ancient site.

**Plaka** is an area primarily associated with commerce and tourism. It is located in the historic centre, lies next to northeastern side of the Acropolis Hill (156m in height), bordering the rundown district of Psirri and the city’s commercial triangle. Plaka encloses numerous archaeological sites/monuments and is the oldest district in Athens with urban characteristics still following some patterns of the ancient and medieval city (Fig.15a&b).

It is well integrated into the morphology and topography of the area (a rocky terrain) and has retained its residential character and size. Many streets still have the same scale and location after thousand of years. In addition, the commercial, social and recreational spirit of the past has remained on the same northwest sides of the district where the ancient roman and medieval agorae were located (Fig.15a).

Plaka covers an area of 35 hectares of which 37.4% is public space (25.7% streets, 4.5% squares, 7.2% ancient sites) [7]. National statistics have identified a population of 1,400 inhabitants and a low density of 40 persons per hectare (1991), a 69% reduction from the early 1970s (4,500 inhabitants, 129 persons per hectare) [7]. The buildings are 2-3 storeys high and about half of the streets are pedestrianised (Fig.16). Extensive restoration has followed years of surprising neglect (considering it is next to a World Heritage site and was once a prime residential area) but slowly inhabitant numbers are increasing.

Recent projects include: Over one hundred facade restorations to date have taken place in the historic centre including twenty-five along Adrianou street (Fig.17). These were implemented in order to emphasize the visual and physical presence of the areas, to upgrade and promote the character of the place.
2.4 Urban Structure Elements

Fig 18a,b,c. Thesion District

- Figure ground diagram
- Pedestrian routes prior to interventions
- Open spaces (excl. Philoppapos Hill)

Fig 19a,b,c. Plaka District

- Figure ground diagram
- Pedestrian routes prior to interventions
- Open spaces (excl. Acropolis Hill/Agora)

Fig 20a,b. 1 - New Metro Station
2 - D. Aeropagitou pedestrian path
3 - A. Pavlou pedestrian path
4 - Pedestrianised Iraklidon Street
5 - Pedestrianised Adrianou Street
6 - Thesion Light Railway Station

b - The Pedestrian Network
Thesion’s figure ground diagram depicts small building blocks (low rise) and an almost regular finely meshed street grid, which displays a certain amount of permeability (Fig.19a). By pedestrianizing one of the area’s main traffic routes (Fig.20a), the once separated into two parts district has been reunited and protected from through traffic. Open areas are located on the edges of the district (Fig.18c). Incoming land uses (recreational) have not really changed the urban fabric. This is due to the topography, conservation controls and the adaptability of certain buildings to new or changing uses. The high percentage of residential use is mainly attributed to the high percentage of individual building ownership and proximity to other densely populated neighbourhoods [6].

The figure ground diagram of Plaka shows small building blocks (low rise) that define squares, streets, archaeological spaces and a finely meshed street grid (smaller than Thesion’s), which depicts partial permeability (Fig.19a). The pedestrian network is extensive (19b). The buildings are partly built on the north slope of the Acropolis Hill gradually descending to the flat areas. Open spaces are scattered inside the district. Land uses such as commercial/office are in the majority, yet the urban fabric has not really changed due to the topography, conservation controls, adaptability of certain buildings to various uses, and archaeological sites (Fig.21) situated inside its area.

Paradoxically, a district like Plaka which possesses sustainable attributes such as an extensive pedestrian network, protected areas by law, ample open spaces (Acropolis Hill included), good public transport connections etc, has a density of 40 inhabitants per hectare. The low percentage of residential use is mainly due to the high percentage of state building ownership/lease, unaffordable house prices, the high number of restaurants/bars and shops, its proximity to the commercial triangle.

Both districts need to keep a balance between the economic interests and the environmental/social dimension. This in turn will make possible the reclamation of Plaka’s past residential nature, improve Thesion’s current favourable conditions and allow local elements of sustainability to realise their full potential aided by the D. Aeropagitou and A. Pavliou development - sustainable in itself because (among others) it protects and promotes the surrounding environments, is self-sufficient and low maintenance.

CONCLUSION

It has been shown that the concept of sustainability has influenced planning policies at both national and local levels. Through the unification of the archaeological sites, sustainability has been promoted via the engagement of urban and environmental conservation options such as the “restoration, renewal, rehabilitation and recycling” [8] of some of Athens’ urban structure elements. Through the reclaimed public spaces of D. Aeropagitou and A. Pavliou, and the rehabilitation of parts of their degraded areas, improvement in the quality of life of inhabitants has been achieved. This is mainly due to the reduction of pollution, the aesthetic enhancement of the townscape, the improvements in pedestrian movement, maintenance and increase of green areas, better accessibility to sites and public transport, visual and physical connectivity / continuity.

In addition, the conservation of the surrounding urban/natural environments places emphasis on the monuments/sites and vice versa. This encourages on the one hand the maintenance and strengthening of public spaces where the public realm can be restored together with a sense of community, and on the other promotes and protects the cultural identity of the city and its natural resources. The D. Aeropagitou and A. Pavliou pedestrian path does not only link the archaeological sites and their surrounding districts together, it also links people to their cultural past through the present and into the future.

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