The reuse of military campgrounds following the interventions of environmental design and the grant of their use to the contemporary city. The case study of “the Velissario military campground in Ioannina”

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Abstract. The current case study presents a proposal for the redevelopment and reuse of the Velissario military campground in Ioannina, in western Greece. The military base is considered a prohibited area and an urban void completely cut off from the city. Firstly, the concept of sustainable development, the legislative framework, the historical background of environmental protection and examples of the reuse of other military bases worldwide are mentioned. Secondly, the significant characteristics of the surrounding area and the interventions according to the environmental design for the sustainable development of the city are presented, such as the preservation of the existing greenery, the creation of new green areas and their connection with the adjacent Pyrsinella park, for the creation of a Metropolitan Park, as well as the construction of a lake. Furthermore, the creation of sports and cultural facilities, hiking and cycling trails, the preservation of the necessary existing military buildings and the construction of new buildings is suggested. Environmentally friendly structural materials and renewable energy resources will be utilized. Both water and litter created in the park will be recycled and reused so that they compose the Prototype Park of Sufficient Environmental Management that we aspire to create.

1. Introduction

In many countries around the world the military campgrounds are located in key positions, while they occupy significant areas, either within the urban fabric of the city or near the city's administrative borders. This came about as a result of the phenomenon of urbanization, with the natural consequences of the rapid growth of cities, which in turn resulted in the confinement of these spaces within themselves. For many years now all around the world, the exploitation of the inactive military campgrounds has been an important topic of conversation. The need for public and green spaces for the sustainable development of the city, makes it imperative to remove the military campgrounds from the interior of the cities, while it focuses on their attribution to the relevant municipalities.

The particular dissertation presents the corresponding policies that have been applied around the world and in Greece for the exploitation of the former military campgrounds. According to the
bibliographical references and examples, the strategies of the approaches are examined, presented and compared according to the principles of Environmental Planning.

The subject of this dissertation is the redevelopment and utilization of the Velissario military campground in Ioannina. The military camp is located in a central position in the southern part of the city and close to the city center, interacting with the main road axis of Ioannina - Athens, the University and the University Hospital.

Based on the principles of Environmental Planning, we aim to create a Metropolitan Park at the entrance of the city of Ioannina, in order to highlight the importance of green spaces in the urban fabric.

With the redevelopment - utilization of the camp, the citizens of both the city and the wider area will benefit from a number of important and positive results such as social, economic and environmental and the quality of their life will be upgraded.

2. Methodology of the project
The present study was conducted to address the consequences of the urbanization that many Greek cities face. The rapid growth of the urban population due to the movement of rural populations to cities created an increased need for housing. The uncontrolled expansion and sprawl of the urban areas resulted in the containment of the military campgrounds in the urban fabric, while the need for public green spaces is presented through some typical examples. Furthermore, we then presented the European and global conferences where solutions to the problems caused by urbanization were discussed, elaborated and proposed, and common principles and objectives for sustainable development were formulated.

Moreover, we analyzed examples of the redevelopment of military camps in various regions in the world and in Greece, and cited some uses that are usually placed inside these spaces, in order to integrate them into the life of the city. Last but not least, the characteristics of the city of Ioannina and our proposition for the redevelopment of the Velissario military campground are proposed.

The military campground’s existing situation was recorded on the topographical plan of the site with data obtained after our visits to the exterior of the military area. As the military base is active, neither entry to the military area nor photography is allowed, for reasons of national security, so we collected the information, mainly through visual observations from a distance and from the available photographic material outside of the military base. Moreover, in cooperation with various services of the State, the Municipality of Ioannina and the Technical Department of Epirus, we collected information on demographic, statistical, meteorological and environmental data of the area, topographical plans, as well as relevant studies and plans concerning the area under development and the wider region.

In the final phase, we proceeded to process and evaluate the data we collected, set the objectives of the study and came up with our final proposals for the redevelopment of the military area.

Finally, the proposal for the redevelopment of the military campground according to the principles of environmental design is presented.

3. Results and discussion

3.1. Policies and examples of utilization of former military campgrounds.
The number of people on the planet living in large urban cities has tripled between 1950 and 1985. This was the result of the uncontrolled expansion of the city boundaries without any planning, resulting in the creation of unhealthy living conditions for people, without the necessary green spaces and other necessary infrastructures, with significant impacts on the environment. Also, in combination with the uncontrolled and environmentally unrestrained industrial development contributed decisively to the destruction of the environment.

The problems of socio-economic development, the destruction of the environment and the uncontrolled use of the natural resources are interconnected and global. The world community has
been active since 1971, in order to take measures to tackle the problem. The main objective is to pursue environmental policies aimed at sustainable development in the areas of: a. environmental protection, b. social well-being, c. economic development and d. to contribute further to the realization of the following important objectives: the protection and management of natural wealth in the context of economic and social development, the shift towards the use of renewable energy, the avoidance of unsustainable patterns of production and consumption, the eradication of poverty and the acquisition of expertise at national and international level.

The idea of sustainability inspires every effort to reconcile the contradictions that arise between economic growth and environmental protection.

The European Union promotes and funds actions related to the economic, social and environmental sustainable development and is very active in the field of policy implementation.

The European Union’s Sustainable Development strategy serves as a guideline for all member states, in order to achieve the objectives the EU has set for promoting all forms of sustainable development at regional, European and international level.

Greece has made significant progress in sustainable development in recent years.

The unplanned and uncontrolled expansion of settlements mentioned above, resulted in the enclosing of military camps within the urban fabric and the creation of “urban voids”.

Inactive military facilities are usually a tool for major changes and impacts in both the economy and local communities. They can contribute to urban renewal, they can create economic opportunities, they can give cultural value to the historic buildings included in them and improve the living conditions of citizens throughout the city. By enhancing urban greening and extending nature into the urban fabric, environmental and social benefits are maximised.

In Europe and in the world many cities are trying to solve their environmental problems by exploiting vacant abandoned sites such as former military camps, harbours etc.

In the centre of Seoul, South Korea, the site of a former United States military base -after the appropriate interventions- will be reused as a vast public park, the Yongsan Park- Forbidden Land.

In the city of Piacenza, Italy and in the Pontieri area, the site of the former military installations located between the city and the borders with its historic walls (next to the River Po), a green space with simultaneous recreational, cultural and other activities will be created.

In Greece, during the 1980s, the first attempts to redevelop similar spaces led to the fragmentation of land to cover the needs of public utilities and infrastructure, without taking into consideration the space integration of the urban environment. In recent years, however, the interventions for the reuse of the sites of the former military campground of Paulou Mela (in western Thessaloniki) and the Kodra former military campground (in eastern Thessaloniki) take into account the European and international policies for the utilization of similar areas based on the principles of Environmental Planning, aiming at the sustainable development of the city.

3.2. The Objective - General design principles.

The Velissario military campground and the possibility for its concession and development for the city of Ioannina, has been the subject of discussion for many years by various bodies of the city (the Municipal Council, the Technical Department of Epirus, etc.). The area has a considerable urban, spatial and ecological importance, as it is located at a very short distance from the city center, and the buildings (the Old Technical University building) are historical resources and evidence of a function that marked the life of the city in the past.

The Municipality of Ioannina has repeatedly expressed its desire for the relocation of the military base out of the city borders, so that the area could be attributed to the city.

Both the Regulatory plan and the General Urban Planning have been established and include this particular military area. According to the General Urban Planning, it is proposed to divide the military campground in building blocks, with the aim of urbanizing it and constructing schools of various levels of education and sport facilities to serve them.
Our proposal, as analyzed in this study, has a different approach to the utilization of the site than the one envisaged by the General Urban Planning of Ioannina. By considering and assessing the following:

1. The value of the military area and its connection to the adjacent Pyrsinella Park
2. The small distance between the military area and the city center.
3. The uniqueness of the military base, due to its key position inside the city and in a junction that connects it to the city, as well as the University and the University Hospital.
4. The fact that the site is located very close to rapidly developing suburbs and areas of the city of Ioannina (Anatoli, Katsika, Neochoropoulo, etc.), which have a great lack of sports and recreation facilities.
5. The fact that the city of Ioannina possesses only a few small green areas.

We propose the attribution of the total area of 580,000m$^2$ of the Velissario military base to the city. For the redevelopment proposal of the military area we have an Environmental Strategy in mind.

The fact that the city of Ioannina lacks green spaces, has few small parks and little greenery in its center plays an important role. We propose the creation of a green space in the military base, as the greenery in the area today is spot and quite limited. The existing greenery covers about 20% of its total area, while under our proposal it will reach 60% of the area. The presence of water will be extensive with the lake we propose to construct, as it will contribute to the environmental upgrading of the site in combination with the greenery.

Due to the key position of the military area at the entrance of the city, the relocation of the Administrative center of Epirus is proposed in the western part of the military area, according to the General Urban Planning. For the same reason, the school and sport facilities will be constructed and they could be used by the people visiting the park.

The existing buildings play an important role in the park’s planning and after their restoration and embellishment could be used as exhibition areas and cultural facilities, small shops, workshops, coffee and restaurant, for the recreation of visitors.

Hiking and cycling trails are planned within the park, as well as staging areas at selected points. The existing trails in the military area are maintained, but their width changed according to their use as a primary or a secondary trail.

Our proposal for the redevelopment of the military base achieves the connection between the developed area of the basin in the western part of the military base, and the eastern area (Votanikos, the lakeside area, etc.). The military campground will work both as the connective factor and as a passageway for these areas. For this reason we have maintained the main trail connecting the two main entrances of the military base (one from Dodoni Avenue and the other from Nicopoleos street). With the proposed redevelopment of the area we aim to create a green park for relaxation, where different activities and functions will coexist.

We try to minimize the interventions in the military area; the existing topography of the area is maintained to a large extent, so that the excavations and filings are limited to the absolutely necessary. We shape the topography on one side to create the lake in the heart of the military area, but on the other side the interventions can be undone. The use of reinforced concrete is limited where it is necessary for the safety of structures (such as school buildings, administrative center, etc.).

In order to save energy, and for the energy sufficiency of the park, renewable energy resources (photovoltaic cells) will be used. We suggest the use of a small electric car to cover the park’s operational needs.

For the landscaping of the open space, the building materials used will be perforated.

Last but not least, we aim to create a Prototype Park of Sufficient Environmental Management. The litter produced will be composted and used as fertilizer for the park's soil. Through this cyclical process what is produced in the park will also be consumed. In this way the litter produced will be minimized.

We propose the creation of a green spot and the installation of recycling and composting bins.

‘Figure 1’
Figure 1. The proposal for the redevelopment of the Velissario military campground and its connection to the adjacent Pyrinella Park.

4. Conclusions
Almost all cities around the world have a lack of open green spaces within their urban fabric. According to bibliographical references and examples from Greece and the rest of the world, the areas of former military installations offer the possibility, after their redevelopment, to create green spaces and parks with the aim of sustainable development of these areas.

In addition, a network of pedestrian and bicycle paths provide a direct connection between the lakeside area and the University and the University Hospital, following the reconstruction of Niarchos Avenue.

In our proposal for the redevelopment of the Velissario military campground, we exploited the key position of the military area in relation to the city and the road axis of Ioannina-Athens, which is the main entrance-exit of the city.

The proposed interventions achieve the connection between the areas around the military campground, which are now cut off from each other, i.e. the areas to the east of the military camp and the areas to the west of the military camp and the University and the University Hospital.

In our proposal for the redevelopment of the military base, we propose the creation of an Environmental Park, the expropriation of the area between the Velissario military base and the Pyrinella Park, which had previously been urbanized and the union of these areas with the adjacent Pyrinella Park, for the creation of a Metropolitan Park following an Environmental Strategy.

In implementation of a relevant proposal of the Regulatory Plan, we propose within the area - and in a suitable location- the creation of the Administrative center of Epirus (to house the services of the region of Epirus) in the western part of the military area, in order to decongest the center of the city, as well as the construction of new school facilities.
We maintain some of the existing buildings and we propose their restoration and embellishment, both the former Polytechnic building which is a listed monument, as well as other buildings that are absolutely necessary for the function of the park, in order to increase the green spaces. These buildings could be used as exhibition areas and cultural facilities, small stores, workshops, cafeterias and restaurants, for the park visitors' leisure.

According to our environmental strategy we propose the existing greenery’s preservation, the planting of many trees and other plants in specific places, the integration of the water element in the area with the construction of a lake in the heart of the park, the use of water-permeable materials in the planned ground coatings and the use of other suitable materials for coating of the roofs of the buildings. We also promote the circular economy, both through the use of water that will be used and the recycling of the waste produced. We make use of solar radiation and with the proper photovoltaic cells we achieve the energy sufficiency of the park for the operation of buildings, the outdoor lighting of the surroundings etc. We also propose the use of a small electric car for the park’s operational needs.

Last but not least, we create administrative areas for the operation of the park, cultural areas, as well as hiking and cycling trails with staging, gathering and recreational areas. Our proposals aim at the sustainable development of the city and improving the quality of life of residents of the city and the surrounding area. ‘Figure 2’

![Aerial photograph of the military campground, after it’s redevelopment as a Park and it’s connection to the Pyrinella Park.](image)

**Figure 2.** Aerial photograph of the military campground, after it’s redevelopment as a Park and it’s connection to the Pyrinella Park.

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