



International Conference on Sustainable Synergies from Buildings to the Urban Scale, SBE16

The Regeneration of the Commercial Triangle of Athens; Sustainability Rationale

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Abstract

In this paper the rationale of the bioclimatic regeneration of part of the commercial triangle of Athens is presented. In this 11 ha area, identified by three streets in the form of a triangle, the most vivid commercial activities have been taking place, from the transformation of Athens into a capital city in the 19th century, up to late 20th century, when the upcoming of “malls” displaced consumption habits from small shops to large shopping centres. As it is a place that has been either within the city walls or at the outskirts since antiquity, its geometry is very much affected by ancient and medieval Athenian city planning, which is explored and highlighted in this regeneration project. The commercial triangle area today is characterised by a mixture of neo-classical and modern buildings, as well as simplexes of pedestrian streets. The landscape of the area is being reshaped as the old uses that reflect the former economic backbone of the city, are displaced or replaced by new ones which are more related to the industry of entertainment. In this paper, a brief spatial description and historical review of the area is presented, pinpointing to the political and municipal decisions that have affected the area, highlighting the conflicts that the area faces today. Existing land use is monitored in detail and compared to past ones. The sustainability rationale of the regeneration of the public spaces of this area is presented, taking into consideration environmental issues (pedestrianisation of narrow streets, environmental footprint of used or reused materials, recycling municipal waste, low energy consumption street light, construction site measures), bioclimatic issues (microclimatic considerations, surface materials, placement of vegetation in narrow streets), cultural issues (putting forward the area’s historic footprint through the design) as well as social issues (conflicts that might arise from competitive or incompatible land uses), trying to achieve a holistic sustainable regeneration approach.

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Peer-review under responsibility of the organizing committee of SBE16.

Keywords: pedestrianisation; regeneration; commercial triangle of Athens; bioclimatic design; land uses.

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1. Introduction

When designing bioclimatically for open, public spaces more criteria and parameters are set when compared to a single building design. The possible designs are limitless; nonetheless shadow is a very important factor, especially in southern climates¹. Apart from solar and wind exposure, the ecology of structural materials and the life cycle of the project, issues of mobility, prioritising pedestrians and cyclists, waste collection and treatment, the history and character of the area, its existing land uses and trends, issues of safety as well as social justice are put forward, amongst other criteria of sustainable design.

The 11 ha area that is designed according to this rationale is part of the Commercial Triangle of Athens, in the historical centre of the Municipality, enclosed by Athinas Street, Evripidou Street, Praxitelous-Lekka Street, and Perikleous-Athinaidos-Agia Irini Street. Today, five year after the economic crisis started in Greece, the lack of preservation of public areas, in relation to the deserted buildings and shops exhibit a landscape of abandonment in the city's historic centre. In this paper, the research made for undoing these conditions from the Commercial Triangle, with main tool the sustainable design of public spaces is presented.

2. Background Research

The methodology that is followed for recording the status of the area today consists of in situ measurements and observations, during different periods of the day (in the morning, in the afternoon –when a lot of commercial shops shut down, and at night) as well as different seasons (autumn/winter –November 2014-February 2015- and spring/summer –April-June 2015). Maps of the ancient city, historical texts and respective bibliography are collected and examined, so as to understand the urban transformations that have taken place in the area. Climatic data is collected from meteorological stations near the area. Interviews with people who work in the area take place, as well as with people who inhabit or frequent in the area. The collected data are analysed and compared with existing data and studies on the Commercial Triangle.

2.1. Historical Background

The Commercial Triangle of Athens is located in the historical city centre of the Municipality of Athens. Since prehistoric times, this area has been inhabited, either within or outside the city walls². The area has been characterised by randomly placed, narrow streets, as there were no city planning regulations in ancient Athens². That is why the ancient streets of the commercial triangle have irregular orientations, small widths, with very little space for vegetation. Apart from that, the area has been characterised by the lack of vegetation since 600 BC², up to the 1980ies, when the first pedestrian streets in the area were established³ and trees were planted.

In fig. 1 the results of the bibliographic research in the evolution of the area are presented, comparing the formation of the city in the studied area in 500BC (fig. 1a) and in Medieval times (more specifically during 1456-1687AD) (fig. 1b) in relation to today's streets. Through this bibliographic research, it has been also found out that ancient Athens was built on small rivers, tributaries and streams², whose empoldering has affected the geometry of some streets. In the instance of Kalamiotou (cane) Street, the empoldering of small rivers that has taken place from antiquity to medieval times and up to date can be easily observed in fig. 1a and 1b.

With the formation of Athens as the capital of Greece in the 19th century, commercial uses as well as crafts / small industries started taking place in the area. Most of the ancient and medieval streets remained the same, while two North-South oriented parallel streets, Athinas and Eolou Streets, were made, facing the Sacred Rock of the Acropolis, creating irregular angles with existing streets⁴. The area developed rapidly. Eolou Street was a central axis of the new city, with two-floor buildings and land uses such as residencies (at the upper floors), commercial uses (on the ground floors), hotels and leisure facilities⁵. Eolou was a street used a lot by pedestrians and not by vehicles, while public transport passed through it. The commercial and small industries uses dominated over the rest uses (residences, services). As time passed by, the social character of the area changed, becoming a more working class area, the border between the eastern part of the city (inhabited by the upper class) and the western part (inhabited by the working class)⁶.

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