EWT/ Eco Web Town
Magazine of Sustainable Design
Edizione SCUT, Università Chieti-Pescara
Registrazione al tribunale di Pescara n° 9/2011 del 07/04/2011
ISSN: 2039-2656

The Masterplan of Tirana.
Sustainable Architecture and Urban Design

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Abstract
This study focuses in Tirana, the capital of Albania, which has witnessed in the last decades a boom construction and has suffered the most chaotic urban development as a result of the rapid growth of the city in size and population.
Over the last 25 years in Albania, especially in the big cities, the residential spaces have been in a confusing state. Despite the accelerated progress in construction, the directives and the construction technologies are very backward, causing damage to the environment given they use non-renewable energy resources. The necessity of progressive transformation of the contemporary city is made possible thanks to the existence of opportunities for territory development and the emerging demand of innovative spaces, generated from the evolution of the way of living.
The revitalization of the suburbs, preserving nature as heritage for future generations, creating connections between distant spaces, removing isolate and abandoned spaces, using sustainable systems to recuperate the energy, are all strategies for "*the best of all*". "*The discipline of landscape*" provided in this moment of transformation of the attitudes, the scenarios, the concepts, and the technical instruments to observe and transform the urban reality based on updated European Standards and Directives, which will be implemented in a master plan study in one of the most important urban spaces of the city of Tirana.
In order to resolve such problem the municipality of Tirana announced in 2012, the winner of the open competition for the master-plan of Tirana, GRIMSHAW Architects.

Keywords:
Tirana General Master-Plan, Urban Design, Sustainable Design, GRIMSHAW Architects.

Il Master-Plan di Tirana.
L'Architettura Sostenibile e il disegno della città

Abstract
Questo studio coinvolge la città di Tirana, capitale dell'Albania, che ha vissuto negli ultimi decenni un boom edilizio rilevante ed ha subito uno sviluppo urbano caotico a causa della rapida crescita della città in termini di dimensioni e popolazione.
Da 25 anni, in Albania, soprattutto nelle grandi città, gli spazi residenziali si distribuiscono in maniera disordinata e confusa. Nonostante i progressi ultimi dei processi costruttivi, le modalità e le tecnologie di realizzazione sono ancora inadeguate. Si avverte da più parti, la necessità di una trasformazione consapevole della città contemporanea, resa possibile proprio dalla nuova crescente opportunità di sviluppo del territorio e dalla domanda emergente di spazi innovativi, alimentati dalla evoluzione dei nuovi modi di vivere.
I temi legati alla rivitalizzazione delle periferie (preservando la natura come bene comune da trasmettere alle generazioni future), alla creazione dei collegamenti tra gli spazi dispersi, alla integrazione delle aree isolate ed abbandonate, alla promozione di nuove forme sostenibili per il recupero dell'energia; presuppongono un insieme di strategie "*the best of all*". È quindi indispensabile favorire le discipline più avanzate intervenire sul paesaggio (urbano e non) capaci di fornire, in questo momento di trasformazione, atteggiamenti, scenari, e strumenti tecnici, per osservare e trasformare la realtà urbana a partire da normative e standard aggiornati a quelli europei. Tutto questo è alla base del progetto di studio, approfondito per il Master-Plan generale, in uno degli spazi urbani più importanti della città di Tirana.
Proprio in questa direzione, l'Amministrazione di Tirana ha annunciato nel 2012 il progetto vincitore del concorso per il Master-Plan di Tirana, elaborato dallo studio Studio GRIMSHAW Architects, sul quale si stanno indirizzando alcune proposte progettuali.

Parole chiave:
Master-Plan Generale di Tirana, Urban Design, Progettazione Sostenibile, GRIMSHAW Architects.

Introduction
In the last 25 years, building industry has become one of the most dynamic sectors of the economy of Albania. Apart from the great amount of regular constructions, illegal settlements have been a distinctive feature of Tirana's urban landscape. Outdated construction norms and standards have penalized competent authorities due to the inability to prevent the generation of many negative factors such as: augment of the maximum limit of exploitation intensity of construction motivated from the thirst of developers for higher profits; non-selective and non-seismic construction; non observance of safety distances between buildings; "concreting" of green spaces and recreational facilities; public parking disappearance. About 95% of the buildings in the country are built based on an obsolete technology beyond any European standards, the main compulsory condition required for Sustainable Architecture.

Analysis of the area under survey – the main problems
The area under survey lies in the northern part of Tirana city. It has an area of about 102 ha.

Figure 1: The area under survey - Bird view of the area under survey

A typological analysis of the area shows that mostly the cases of interventions reveal clear use of the same architectural model, based on the reconstruction of the traditional city, adapted to the rapid consumption, management and construction.

Figure 2: The existing situation of area under survey

The area is developed without public spaces, services or appropriate urban studies, with inorganic construction approaches where are combined forms and functions of a typical suburb, with a high level of physical, functional, environmental and social degradation. There is no known object of cultural significance. The central train station is concentrated in the

southern part of the zone, defining the northern head of the existing boulevard, in advanced state of degradation as well as its own railway which passes through the whole zone, leaving behind abandoned spaces. Only a few small spaces around the area have a paved road network, in most cases are missing or provisionally established from the passage of vehicles to reach destination. At the same time street lights, sidewalks and signs are missing completely. Tirana River passes in the northern part of the area. The current situation shows total abandonment and neglect since the quality is worsen by illegal dumping of solid inert waste, garbage and sewer water discharge. Unlike the city center, characterized by smog and dust and dominated by traffic, this area has the lowest percentage of pollution due to lack of infrastructure and construction sites.

Objective and Methodology

The intervention is motivated from the obvious need for immediate interference of land and landscape revaluation in Albania and from the necessity to develop design skills to achieve sustainable development that dominates the daily political, economic and social discussion. The study area shows a great prospective of economic and social recovery for the future of the city. Despite the interest and various contributions of different disciplines, it is noted particularly the absence of experts in the sustainable urban design with pluralistic understanding of the issues, with a clear ability to create, design and manage the process of urban transformation.

In order to promote the area, an ensemble of new ideas must meet and interact to each other, taking into consideration:

• the revitalization of the suburbs
• the ability not to deny the subject identity
• the recovery of the relationship between city and river, city and boulevard, through the study of infrastructure system and the research for a possible solution to some key nodes closely related to
• the issue of permeability: a visual and physical permeability which is obtained from the interaction of architecture and landscape through the form.
• to provide new perspectives for future development of the area and preserve nature, aiming to pass it on to future generations

This methodology is based on:

- definition of the cognitive structure of environmental situation
- study of previous planning medium and its impact on environment.
- Introduction of strategies and sustainability criteria
- establishment of objectives to be pursued with the new project
- selection of the most appropriate indicators to check the results, environmental and territorial effects expected from project.
- Identification of alternative choices and their consistency to the objectives
- identification of the different uses and elaboration of projects to be carried out

Competition projects

The Municipality of Tirana in May 2012 announced an international competition for the revitalization of the area. This competition was attended by some of the most prestigious studios in the world. The final result was very encouraging and promising for further progress of this study.

Figure 3: Proposal of the Cino Zucchi Architects. Tirana general Master-Plan

Figure 4: Proposal of the DAR Architects. Tirana general Master-Plan

Figure 5: Grimshaw Architects. The winner of the open competition for the Master-Plan of Tirana.

The proposal

Extension of boulevard axis, infrastructure. This study offers procedures, criteria and methods in order to change fundamentally the traditional point view of infrastructure issues, considering the infrastructure as integral part of a more complex process connected with landscape rather than as an autonomous issue or project in itself. The construction of this segment satisfies the implementation of main boulevard extension in Tirana, which has been under construction since the 1930s. The axis length is about 3 km with 8 lanes for vehicles, tram, bike, pedestrian paths etc.

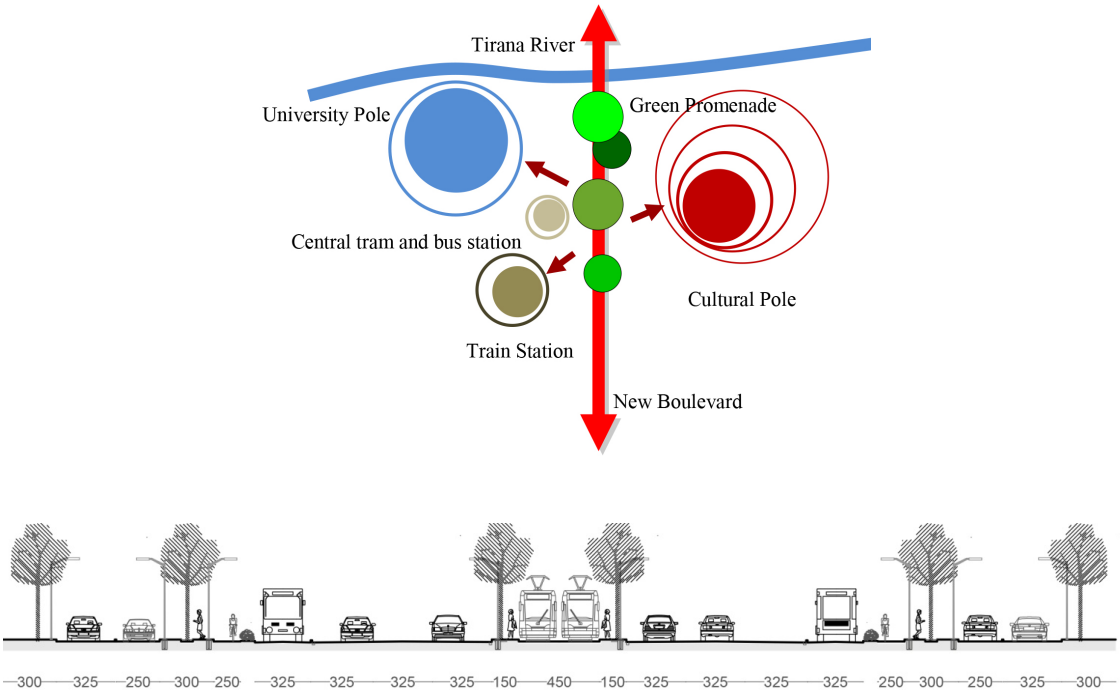

Figure 6: The distribution of functions according to the axis of the boulevard. Boulevard cross-section

- **The displacement of the train station.** The displacement of the train station to the north generates an important communication hub which represents a leading role to facilitate public transport and development of the area. Standing the appropriate capacity, it will ensure all services not only in its inside, but also in relation to other public and private transport, as it will be designed according to EU norms and requirements of the city.

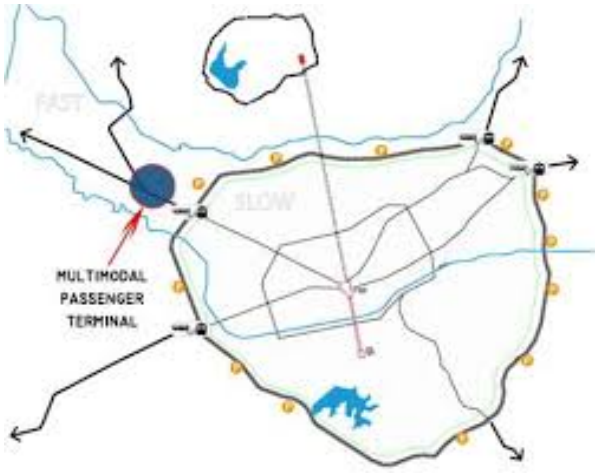

Figure 7: Grimshaw Architects. The train station

- **The administrative area.** The very recent population growth and business development brought the necessity to provide different needs and facilities from institutions. Since the spaces of existing buildings are not sufficient to cope with this growth, a new administrative pole with new spaces that could welcome new functionaries, would be an efficient solution. The displacement of the train station to the north will leave place to a new space composed of several high-rise administrative buildings.

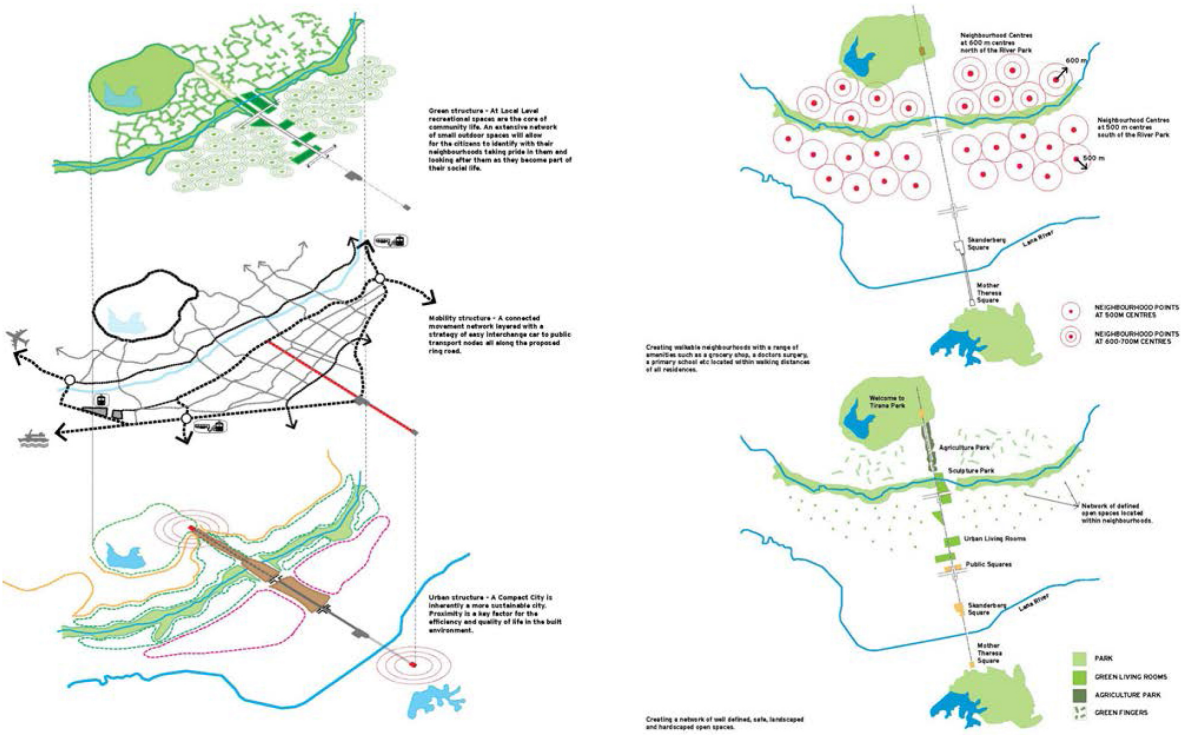

Figure 8: Grimshaw Architects. Green structure, mobility structure and culturally vibrant park

- **ECO-Neighbourhood.** The project is encouraged to develop and generate a residential block with high energy efficiency and minimal impact on the environment, trying to reduce in this way the release of CO_2. This area represents a pilot neighborhood that will offer the possibility of the implementation of these architectural theories. [ECO] Neighborhood is the focus point of this architectural study.

Figure 9: Grimshaw Architects.

From location point of view, the project denies the logic “building/site”, aiming the definition of a public open space transformed into a collective place with voids and buildings, full of movement and relations, playing the role of an urban space. This community allows us to offer, just near the flats, the services necessary to everyday life such as: cultural environments, shopping structures, coffee bars etc. Probably this kind of approach urges people to avoid the use of the vehicle and encourages pedestrians.

- **The recreation area.** The recreation area comprises public spaces which should be treated and perceived from a “landscaper” point of view, while green spaces should be used and perceived as a mixture of building volume and circulation, thus creating a new collective and connected open space for those who claim to achieve quality closer to them. One of the strong points of the design of this area is the infrastructure “masking” to leave space to greenery and pedestrian paths. On the other hand, sport, recreation, cultural and social facilities will revitalize this pole. There will be no lack of private and public parking, which play a fundamental role especially in this area. Mobility within the city will be solved from a series of typologies. According to possibilities and individual willingness, mobility will be ensured, giving priority to promenade spaces and at the same time to bicycle, tram, RBT and private vehicles lines too.

Figure 10: Grimshaw Architects.

- **Tirana River revitalization.** The river plays a definitive role in this area, with a high ecological power in vegetation development on its shores. The requalification and connection of some parts of the city separated, both physically and visually from the river, lead to the revitalization of the promenade along river, which even though keeps a constant sense of continuity, is presented in different ways. The river becomes a large open space, which requires pedestrian bridges to connect the promenade with the rest of the city. Furthermore, the riverbed will be subjected to an adjustment for cruise, offering availability for different sports as well.

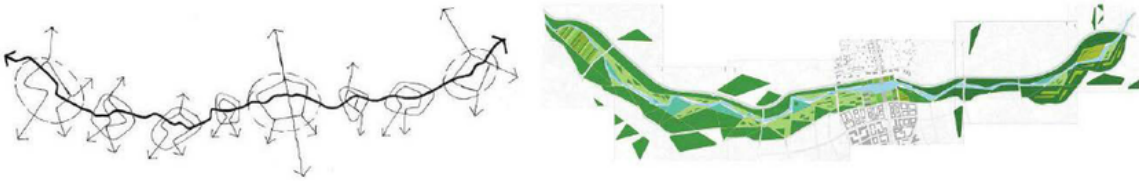

Figure 11: Tirana River opportunities

Conclusion

The implementation of European standards in urban planning and architecture is indispensable and imperative. This study is a challenge towards the contemporary city, which invites urban planners to reflect upon and guarantee the application of such a key strategy. The case study of Tirana expansion zone shows a great prospective of economic and social recovery for the future of the city. Only professionals in the sustainable urban design with pluralistic understanding of the issues can provide the ability to create, design and manage the process of urban transformation. Furthermore, this research offers procedures, criteria and methods in order to change fundamentally the traditional point view of architects and urban planners towards public spaces, infrastructure and housing issues. The main focus of the study is concentrated on the approach of the project to the landscape, building rules and regulations, and high-energy efficient design systems. This approach will have a positive impact on the improvement of urban spaces and promotion of sustainability to the inhabitable spaces.

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