

Milos Bobić

The concept: 'Basic Urbanism'

Miloc Bobić was in the true sense of the word a urban planner working with the basic, essential elements of urban planning; climate, patterns, relationship between public and private, landscape, etc.. A unique example of his work is *The Pattern Image* (BOBIC & THOTH, 1994). In this book a wide range of living and working environments from all over the world are presented in order to provide the urban designer tools to deal with the urbanisation question of tomorrow.

In the last two decades was Milos Bobić living in Amsterdam, where he died in 2007. In order to give an overview of the work of Dr. Bobić a short biography, several of his projects, and some extracts of the book *The New Nature* are presented here. *The New Nature* is the unfinished book by Milos Bobić on the relation between the city and the environment.

With special thanks to Mirjana Milanovic, without her it would not have been possible to give this homage to Dr. Milos Bobić.

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Biography

Milos Bobic graduated (1972) and received his PhD (1988) at the Faculty of Architecture University of Belgrade, where he also taught at the department of Architecture and Urban design. He published several books, including *The role of Time in City Spatial Structure* (Avebury 1990), *The Pattern Image*

(THOTH 1994) and *Between the Edges* (THOTH 2004), many articles and numerous essays in professional publications and magazines. He was founder and editor of a monthly magazine on architecture and urban design – *Komunikacija*. In more than 40 architectural and urban design competitions that he participated in, he applied his theoretical research and design skill, winning more than 20 awards. Besides working as urban planner for the Amsterdam City Planning Department, he taught on a number of schools – the Academy of Architecture in Amsterdam, KU Leuven and School of landscape design in Larenstein. In 2007 he became a professor on the University of Novi Sad. Dr Bobić lived in Amsterdam since 1992, where he died in 2007.



Nieuw Oost, 1992, co-authors: Gert Urhahn and Jurgen van der Ploeg

City development is concentrated on compact islands, while most of the plan-area is dedicated to water and nature-development.

Rousseau's dream (Out of *The New Nature*)

The main question isn't how do we have to respond to contemporary developments but what are the conditions of the future? We have to think of the Next Nature today if we want to reach integration between urban growth, landscape and cultural aspects in the future.

The question is how we have to behave and act in the today's' context of ever-changing relationship between urbanization and so cold nature, i.e. landscape and city surrounding. Should we continue to build cities as we have done in the last centuries or do we have to change our understanding of the context within which we are acting, I take this facts as the frame within

which we have to develop the urban world of the future. In short, in this view, the rustic and utopian vision of the world is replaced with one, within which so called nature is transformed in the recourse that makes city functioning and survive. We have to accept that the Rousseau's dream is over and start to deal with new reality, keeping philosopher's idea as an inspiration and as a romantic framework. Finally, experiments and projects of different scales that I have done myself or with my students as well as other 'progressive' approaches worldwide can be taken as case studies for the theme.

To keep idealized nature seems impossible but the traditional values can and must be preserved and employed in every of new human environment.

Those values are shrinking in two words: equilibrium and process. And equilibrium comprises a sense, at least an echo of integration. Within this equilibrium, one of the elements always prevails but the all elements of the system have to work together as a sort of

perpetuum mobile.

Considering the future of cities and towns we have to accept several necessities of today's common life. We have to learn about them from cities that already passed through the phases that are in the front of most of the smaller cities. Compared to the world cities as New York, London or Paris, other growing cities and towns of today have long way ahead before they will reach similar proportions, problems and conditions. But, these world cities can be used as a reference for those who will come. Proper understanding of their experience and morphogenesis seems as a useful lesson to all others. Among all other facts, the following ones are the most obvious:

- Unlimited growth,
- Daily devastation and intensive use of the landscape for the city uses and users,
- Permanent transformations of both city and the landscape.

However, global expansion of cities and urban

culture in the towns and villages is inevitable. Global village is taking its range. It is not an expansion like the one at the beginning of the industrial revolution, but a steady expansion that occupies new territories in a continuous process for. Thus, it can be estimated that global cities as well as small towns will become points of different references in the continuous urban field of the future.

How to deal with this new phenomenon? It asks for some visionary approach. But, also we have to admit that lot of visionary development and progressive planning fell short of urban reality. We have not been able to predict trends and developments that had been taking place. Way too often, the urban theory is putting forward the cultural potential of the urban society as a driving force of the city development, its growth, rising congruency and complexity. But, it is economy that has to be accepted as a driving force behind the contemporary system of changes in the ways people understand and use the cities around the world.

Sustainable housing Guanajuato, Mexico

Co-authors: Petar Zaklanovic

The proposal is based on the understanding of sustainable housing (environment, development) as 'something that fits'. That 'something' contains two basic forces: nature and man, and these two communicate through the built structures. Building and manmade structures are in that sense mediators or interface between the people, their activities, culture and lifestyle, and the natural context. The crucial role of the built environment and its structures is to fulfil human needs and to create proper and sensitive harmony between the man and the nature. In that sense 'to fit' means logical and balanced interrelation between people's culture, social and economical conditions, on one side and the buildings and the environment on the other. Simultaneously, this approach opposes certain common contemporary

development principles (architecture) that often appear on the three basic levels of every contemporary urban structure: settlement, neighbourhood and building. These principles are:

- Planning from above and massive production, cause human environments and buildings insufficient to the particular geographical location and culture. It is possible to enable both, the control of public properties and give to the people right for self expression by creating spatial framework (hardware) and particular building rules that co-ordinate individual building activities (software).
- Neglecting of human resources, that have been replaced by massive use of capital-intensive technologies and inflexible state control of the properties

unable people to realise their own needs at proper place and in proper time. Imposing partly self-built strategy we may enable people to take action in building their own houses and in so doing, reduce the costs, preserve the energy and reach liveable housing.

- Imposition of the specific spatial forms of settlement and marketing of housing typologies, just as any other goods, by central agencies and professionals can not give answers to the specific culture and thus can not generate urbanity. By establishing spatial frameworks on the different levels of the structure we are able to create base for the spontaneous development where people can act for themselves.
- Creation of separate traffic system on

the local level stands in the way of integration of the community as a whole. Good and fast access to the main roads spreads the traffic pressure and thus reduces internal traffic density.

- Neglection of the role of occupants or dwellers in the development process of their own communities. People are able to cultivate the habit of direct action instead of waiting for the state and professionals to think for them. They can improve design and housing quality through direct action as well as through adjustment of the plans according to their actual needs and culture.

- Work with the dwelling types that are shaping human lives and are unable to satisfy real needs and life of majority of families. On the contrary, settlements based upon certain building typology are able to preserve context and bring character and identity to the city, become flexible and changeable by giving to the people right to arrange their own domus.

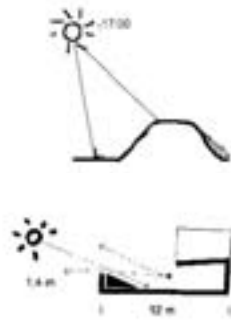
- Urbanisation based on ultimate use of non-renewable resources is in the long run counterproductive to the social and human welfare. It has an indisputable impact on the consequent pollution of the biosphere. By using supra-local resources from specific climate or culture we can protect biosphere and make more sustainable building environment.

We are in favour of an approach that evaluates housing quality in a strong interrelation to the context (social, economical, cultural, and geographical) that improves a human settlement towards the URBAN PLACE.

For that purpose the use of computer advanced methods enable reestablishment of some basic traditional building principles in the scope of a massive urban development. Proper use of topography, insolation, view, climate and



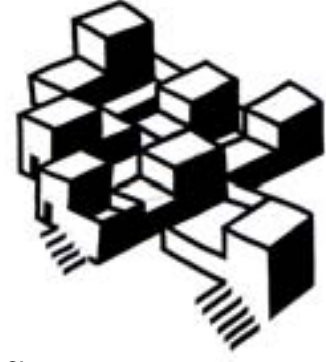
Sun and light analysis - picture of 18 July, 17.00



Direct sunlight should enter each apartment at least one hour a day.



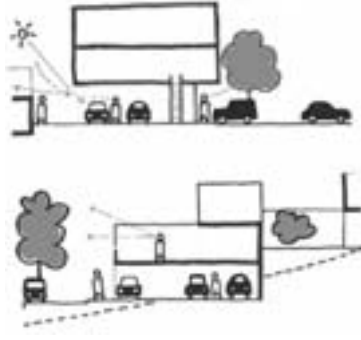
Development sites according to the sun and light analysis



Cluster



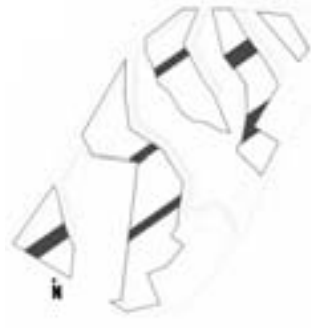
Development sites according to sun&light and topography analysis



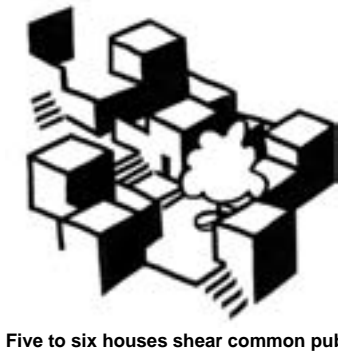
Location of parking places: 50% in open air and 50% under the buildings



Internal system of disconnected pedestrian walkways



Green belt and distribution of social facilities and commercial centers



Five to six houses shear common public space between them



Masterplan

light are together with social configuration preconditions for healthy and sustainable housing. Also, contrasts, such as open and closed, nature and built, small and big, public and collective, self management and good communication and social pattern are the aspects that fulfil necessary psychological and emotional needs of inhabitants and make their relationship with their own domus stronger, complete and sustainable.

For the housing complex in Guanajuato we consider the following six aspects of most importance for the creation of a sustainable urban environment:

1. Climate, insolation and light
2. Topography
3. Social integration, interrelation

and management

4. Communication and parking
5. Building typology and building technology
6. Infrastructure and alternative

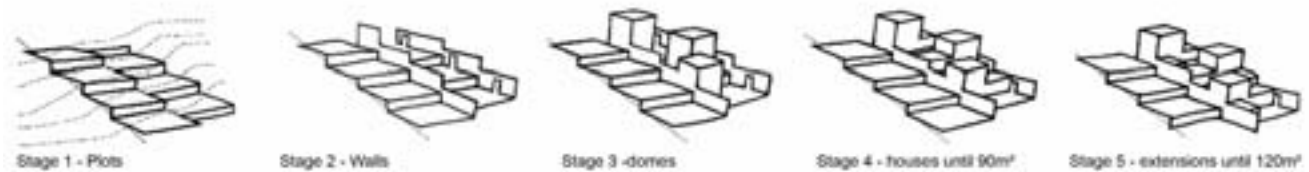
The analysis of these aspects in the interrelation to the specific conditions and circumstances at Guanajuato make the very core of this design proposal. For every aspect we make a statement that is elaborated and juxtaposed to the others on different structural levels. Through the elaboration of these statements and criteria by using advanced computer techniques, we create different layers. The superimposition of these different datascares shapes a basic sustainable spatial framework for the urban development of Guanajuato.

1. Climate, insolation and light

Climate condition of Guanajuato with average temperature of 17,5 Centigrade, highest temperature above 36 Centigrade and high level of humidity, asks for certain protection from the heat. Creation of a comfortable microclimate of the housing is one of the primary goals of the sustainable environment. We consider that direct sunlight should enter every apartment at least for one hour, between 5 and 6p.m., on the day of 18 July. Solar analysis of the area define five locations that are adjust to this criteria and, thus, useful (available) for the housing development.

2. Topography

Dynamic and rich topography of the location asks for a proper selection of



Structural pattern

both liveable as well as buildable locations. Most of the location is covered with slopes and hillsides. The slopes above 20% are too expensive to build on, due to the costs of foundations and supportive constructions. Only location on the slopes under 20% enable building within reasonable costs and also guarantee free view, light and sun for the neighbours.

Through superimposition of sun and topography diagrams the available housing locations had been completely defined. There is no housing on the ground level outside of the defined plots. Only incidentally, the apartment units that are not located on the ground level (terrain) can be located outside of these plots.

3. Social integration, interrelations and management

Social integration in every urban structure is highly dependent on local culture, traditions and spatial configuration. Daily contacts and communication among citizens is predetermined through the way of grouping (clustering) and through how different levels are related to each other. From the level of the family clusters, through the clusters of close neighbourhood and group to the settlement distribution or configuration of the housing, social centres and commercial functions define daily paths of the inhabitants. Social contacts and social integration are highly dependent on these factors.

The housing units are based on semi-closed, self contained building typology of the single family patio houses in direct relation with the terrain. Small neighbourhood clusters are the very core of the spatial and social integrated

structure. Five to six houses share a common public space between them and create a family of entrances. Small playgrounds, urban equipment as staircases, benches, fountain or tree stand as a nucleus of social contacts and integration of all householders. These micro clusters are placed along the main pedestrian communications - Callejon and create housing groups of 20 to 30 houses. These paths are connecting streets, parking facilities and services, with green areas, recreational and social functions and facilities. These paths change their character from urban Callejon, made of staircases and walls, to the park paths laid upon topography in the green, equipped with the wooden bridges, playgrounds and open to the vistas. Orthogonal to these paths there is a secondary network of narrow paths that connect all Callejons.

All social facilities, services and commercial functions are located out of determined housing plots. All common community area are located in the green belts between the housing groups on the hill slopes, in the heart of the pedestrian realm, attached to the main streets. The green belts are dividing housing groups creating cosy living conditions and preserving optimal view and light quality for every housing group.

Building typology allows people to build for themselves. From social point of view, freedom to build is a way to a socially secure and a responsive environment. Also, each extension of a house or act of reparation can become a collective event where people can help each other and socialise.

4. Communications and parking

Besides the fact that, due to the ex-

tremely difficult topography and location, it seems impossible to establish a separate, closed traffic system inside the boundaries of the settlement, for the proper functioning of the internal traffic system and for the integration of the new city part into the whole of the city, it is necessary to combine the local traffic system with the existing city street pattern.

Car and man are brought into a proper relationship. There are two separate parallel networks, one discontinuous for cars and one continuous for paths. They cross each other at frequent intervals. Main accesses to the settlement are located on the existing road Silao Guanajuato and from the new street parallel with Libramiento a la Valenciana road. These two streets are running along the whole location on its the lower and highest parts.

Internal system is based on discontinued scheme which contains streets in the opposite direction to the two access streets on the edge and on the higher parts. These streets are supplying every neighbourhood on highest and lowest terrain levels, or combined. One of these streets runs continually through the site connecting two access roads. The main commercial and social facilities are located along this street. Parking facilities and lots are located along the internal streets. Necessary surface for the 1.800 cars is about 5ha. It makes 17% (1/6) of the total area or almost 45% of the area available for all communal activities including the traffic. It seems reasonable to superimpose some functions and doing so create more space for the greenery and recreational activities. We propose 50% of parking places to be located in the

streets and the other part under the buildings located along the streets. These parking lots are in the direct contact with houses, arranged in small groups from 10 to 12 cars. They are placed under the arcades with the two levels terraced houses above. Lifted semi-detached buildings allow light and air to enter these tiny parking lots creating a car friendly environment. Small service units and shops, or extensions of the apartments could be placed between the parking lots and the arcade. Between parking and the housing groups runs shadowed pedestrian street that connects the Callejons on average distance of 40 meters from each other and interconnect houses, social and recreational facilities with the internal service streets. Because it is possible to walk from one to another end of the settlement without crossing the street, we may consider it a pedestrian realm.

5. Building typology and technology

The most potentially sustainable human environments are those where man and nature interconnect directly. For that reason housing units at Guanajuato are based on patio building typology that enables the inhabitants to have contact with the nature on the ground level according to their culture and lifestyle. The farmers house is the plot of 144m², surrounded with a wall built from sulphur bricks and prefab concrete

panels. The fixed part of the building is the two levels high Dome from concrete prefab panels that makes functional and constructional core of the house. The total surface of the Dome is 60m² (2x30m²). Besides the living room, it contains all the services of the house (entrance, communications, staircases, kitchen, WC, bathroom, storage). There are three positions for the Dome on the plot. The choice for the position is dependent on the location of the house, its relation to the other houses and position of the access. The rest of the surface – around 90m² – is variable and can take different shapes and configurations. It can also be built out of different materials. Number of variations on the basic type is endless. Extension of the house up to 120m² can be realised through the self-built process of inhabitants and may contains additional rooms, workplace or extension of the living room.

The basic type is additionally supported (followed) by smaller units of 90m² and 60m² which are used as a joints between the public space and the housing clusters. These additional types are based on the same core and building typology.

6. Infrastructure and alternative energy resources

The sub-infrastructure follows the corridors of the existing main infrastructure, topography and street pattern.

Main corridors are considered along the Libramiento a al Valenciane road and the Silao Guanajuato and the division of the main suppliers (water, sewage, electricity) is according to the topography. Considering the climate as well as social structure of the future community seems that alternative supra-local resources based low-scale and low-tech systems can be easily applied.

Every house is built up on the same plot size. Second characteristic of this building typology is two story high construction and energy core - Dome. It contains all installations and services of the house. The upper part of the second level of the Dome is free-standing object on the top of basically one level high houses. It stands exposed to the Sunlight. It operates as a solar energy collector which runs the whole internal heating and cooling system. It is based on the natural thermo-circulation of approximately 3m² rainfall water from the roof. The whole system is built out of a system of tubes placed in the Ferro-oxide painted sprayed concrete, the final layer of the facade wall. Parallel with the basic housing typology and social pattern of the neighbourhoods, proper and efficient translation of the local climate into the building structure and metabolism makes one house and the settlement as a whole contextual. It creates a built environment that FITS THE PLACE.

Mutation of the Landscape (Out of The New Nature)

A great part of the planet Earth is urbanised already. Direct link to this stand-point are cities itself while greater part of urbanized field appeared as 'collateral' occupation of the territory for the purpose of connecting the cities to the surrounding network, in order to function and survive. Rapid and extended infrastructure and energy supplying corridors are occupying greater part of the urban field than cities. The global growth of the population, and extensive urbanisation, (especially in the

western hemisphere), have led to several interconnected mutations of the landscape and nature. They are as follows::

- Expansion of the cities,
- Growing mobility,
- Relatively quick transformation of the production processes, technology and consequently land-use and functions,
- Change of ecological structure through transformations of cycles, shortening and speeding-up of the common chains of natural processes, vanishing of element that

are replaced by the other, man-made elements as chemical derivatives, substances and technologies, employed to speed-up production and enlarge productivity.

The main consequence of this is the monofunctional and partial exploitation of the landscape within the context of market-oriented society.

How to achieve the necessary balance that would allow coexistence between the changed natural context and ever-changing city?

Urban Void, Philadelphia - Reshaping the balance between the built and unbuilt

Competition project, co-authors: Wilke Dilkema and Petar Zaklanovic

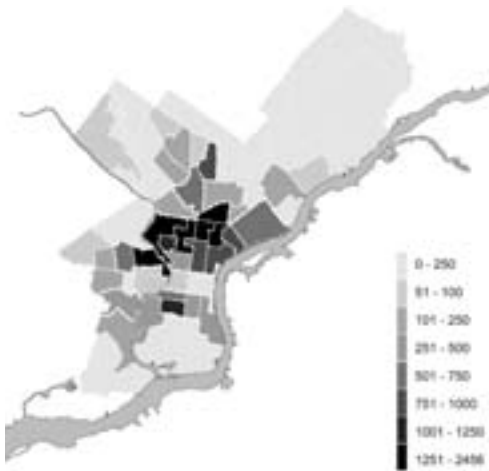
Despite the fact that Philadelphia is the fifth-largest city of the United States a disturbing high amount of empty plots can be found in many neighbourhoods.

Project proposal:

Layers of the cityscape

Where the level of vacancy matches undulating parameters, geological,

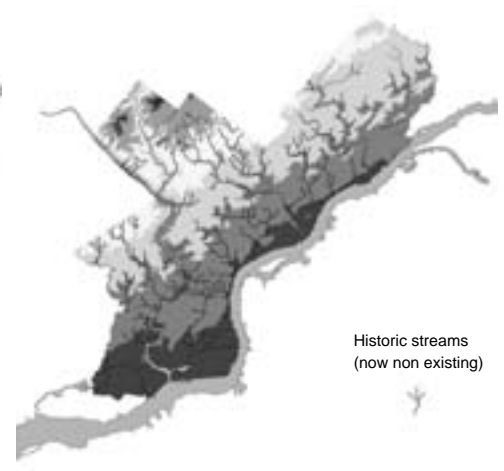
surface soil quality, green and water supplies potentials, the green framework has to be enlarged and the public space network extended.



Amount of vacant lots in neighbourhood



Green + Parks



Topography + Rivers

Urban Void strategies

There are three different levels of involvement, concerning present levels of the vacancy (Vacancy diagram: neighbourhoods with 251 to 2456 vacant lots). These strategies are not to be employed linearly for all locations but according to the particular situation. The first and second strategies are supposed to be maintained within existing market based system. Implementation of the Landscaping strategy and enforcing of the Connecting the Green concept, calls for a more active role of the City of Philadelphia and its funds at the very beginning. In this phase the land has to be transferred from the private ownership to the public, buildings demolished, areas cleaned-up, equipped and landscaped. In return, land value will rise and pay back primary investments in the following phases.

The present levels of vacancy, together with the natural potentials, are used in

order to define zones of intervention. Each separate zone consists of one or more rebuilding strategies to be applied,

Levels of involvement

A Rehabilitation strategy

Where the vacancy is on a low level (up to 25%), the existing Residential Rehabilitation strategy has to be followed. In these cases the quality of the architecture and improvement of the public space may have a great impact on the all important aspects of the city building and its development.

B Redevelopment strategy

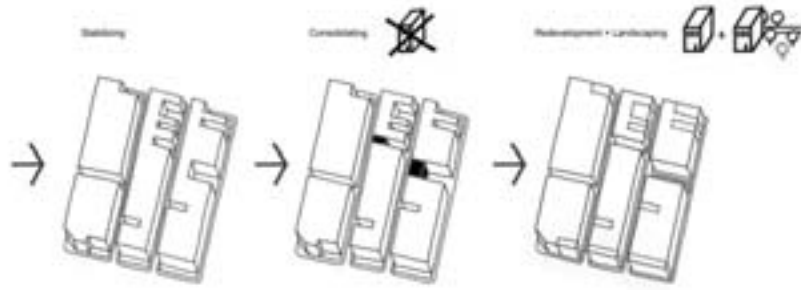
If vacancy has reached a higher level (up to 50%), the existing Consolidation and Redevelopment strategies have to be obtained. However, although implementation of the existing strategy helps stabilizing vacant land and structures, its suburban like redevelopment pattern does not match with the city morphology and building culture. Therefore, the

stabilized structures, lots and blocks have to be redesigned and landscaped following the basic concept, which underlines integration between buildings and the open space in the most sustainable way.

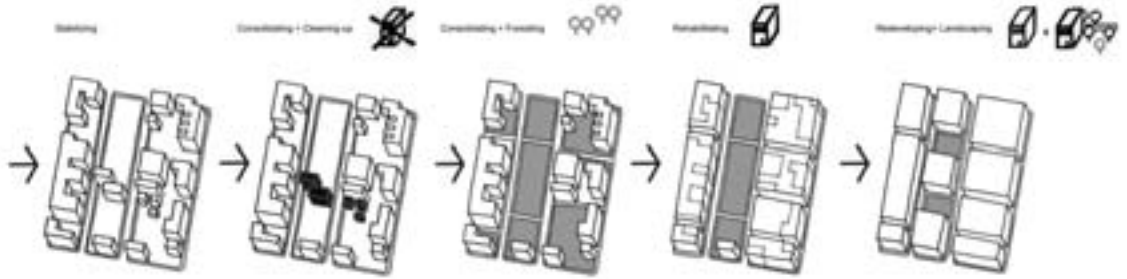
C Landscaping strategy

In neighbourhoods where the vacancy has reached high level and went too far (more than 50%), it is to believe that the more radical strategy has to be employed. We propose a consistent Landscaping strategy that is based on controlled continuation of the existing process for the city's good. Where this level of vacancy matches undulating parameters, geological, surface soil quality and water supplies potentials, the green network has to be enlarged and public space extended. In the first instance it will lead to the further progression and extension of the vacant land. But, in return the Cleaning-up process will create condi-

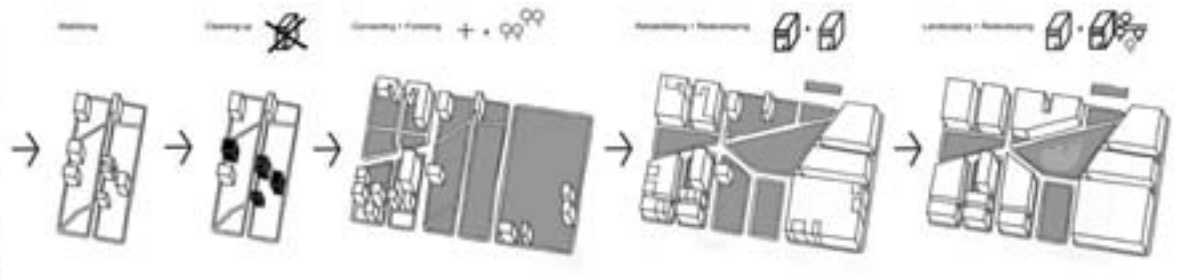
Rehabilitation strategy



Redevelopment strategy



Landscaping strategy



tions for implementation of the Connecting the Green concept- the development of continual or solitary large scale urban parks, recreational areas and mix-use environments, in the next phases.

Steps

Cleaning-up

It is expected that for the enforcing of the Connecting the Green concept an extra 3,000 houses will have to be demolished in the course of time. It will deliver an estimate of 300 million tons of waste. Part of the hornless can be used in the landscaping, for adjusting undulated locations, creating the new topography, or paving cyclist and pedestrian surfaces and paths.

Foresting

According to the basic landscaping concept, several blocks with the vacant lots have to be spatially united and planted with local sorts of trees as much as possible. In twenty or thirty years, these trees will create forests of different sizes, a biomass that can play significant role in creation of a sustainable environment. In the certain ongoing phases these trees and forests can be "thinned" and adjusted to the basic landscape design, while timber from the cut-down trees can be used as landscaping material.

Redeveloping

The existing grid pattern is followed and used as a morphological framework of

the city but it is also adopted through the traffic regulations, fill-in of the blocks and landscaping on the case-to-case basis.

Landscaping

By improving the city landscape, ecology and heightening diversity and quality of the living environments, we can expect re-emergence of the city's prosperous development. The urban field would be a mix-use domain. It would combine different environments, from highly urban to the suburban. It has to offer a mixture of contrasting differences, and at the same time good living conditions for different lifestyles, classes, social profiles, and cultures - but, above all, it must be transformable in time.