PROPOSAL FOR FUNCTIONAL CONVERSIONS – FAUR AREA, BUCHAREST

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Abstract. The objective of this study consists of the active involvement in what concerns finding sustainable solutions in terms of cohesion and dynamics of urban space in Bucharest. Bucharest has a particular character, is a living organism, where inevitably, at some point, there will exist the need to intervene in maintaining a balance, to function or to find a remedy, within the system of relationships, of its functions. Amid a confused political and social context (with economic interests), there have occurred in the late 25 years, the expansion tendencies which have been installed, without however being taken into account the demographic factors of landscape, the architectonic ones, the ones regarding the landscapes and last, but not least, the urbanistic ones. The partial results obtained underline the outstanding impact of the occurrence of residential assemblies and public function constructions (mainly office building) in Bucharest, especially in the areas that were occupied in the Communist period by industrial platforms. Improving the quality of life can be achieved by a comprehensive rethinking of space organizing and by providing solutions in order to ensure the optimum ratio between built space, green space and visual accessibility of those living in the new residential spaces proposed instead of former industrial areas.

Key words: residential space, green spaces, accessibility, urban dynamics, landscape

1. Introduction

The city should be viewed as a whole, as a living organism, that includes buildings for residential purposes, administrative buildings, public spaces and the human component (Andrei *et al.*, 2015; Teodorescu *et al.*, 2012*)*. But there should be cohesion among them, so as to create a symbol of dynamics and urban structure. The lack of a clear relationship, which should establish the manner by which there could be built a number of houses on a certain land, can create conflicts (Canestraro, 2015). After 1960, there was the desire of territory systematization so that urban infrastructure costs should be optimal, being performed through reducing

urban dispersion, by building vertically and by providing a large number of houses for a growing number of inhabitants (Alvarez *et al.*, 2014;). In urban economic development it is necessary to know the urban structural variables that are likely to influence the evolution of a city (Iacoboaea, 2015).

Location and all the other geographic components may have direct effects upon the evolution of population density and, implicitly, upon its congestion problems, associated with other specific demographic problems (Neirotti *et al.*, 2014). Providing liaisons between different neighborhood areas of a city is done by means of transportation infrastructure. This may impact the environment, economy and the social component (Teodorescu *et al.*, 2004), and provided that it is sustainable, it can have a positive impact (Haghshenas *et al.*, 2015; Pravalie *et al.*, 2014). In big cities there is a relationship between urban spatial structure and air quality. Tall buildings, with no spaces in between, create areas with poor air quality. For this it is necessary to find solutions to correct biases in the urban landscape values (McCarty and Kaza, 2015; Sirodoev *et al.*, 2015). There are being made some efforts to assess sustainability of the urban scale.

There have appeared various tools for measuring the impact of demographic and economic pressure on cities (Yu *et al.,* 2015). However, urban sustainability varies from one geographic region to another. Also, the indicators needed for measurements must be accustomed to the specific conditions of the city and, especially, to the context in which there have been established the bases of the major changes occurred (Peptenatu *et al.,* 2012; Pintilii *et al.,* 2013; Stoian *et al.,* 2013; Draghici et al., 2015; Pintilii et al.,

2014; Braulio-Gonzalo *et al.*, 2015). A city should not be seen only as a living space and development of economic life. Lack of strategies regarding territorial urban planning may cause conflicts in the system of relationships and implicitly upon the types of relationships between the main functions of the contemporary city, generating thus negative effects identifiable in the social respect.

2. Materials and Methods

The study has been conducted by using documents, reports published with scientific and organizational accountability within the urban area of Bucharest, which had territorial development as main theme.

In addition, there have been used data and reports from the specialty literature, which have been analyzed, compared and processed in order to find optimal solutions of usage of the land belonging to "Faur" industrial platform. The article aims to answer the following questions:

- how can there be used this space, which once had industrial function?
- how could the proposal of using this region, pursue the growth of urban coherence and inhabitants' life quality?

A first phase of this analysis consists of the identification of the limits and study zone delimitation, considering the industrial area in the period of the centralized economy. Also, finding a functional mutation operation (from the industrial one, as a predominant of the region) which will take account of the existence of those two commercial poles identified in the two trading extremities of the area studied (Fig. 1).

A second phase of the operation is to apply the urban operation under the form

of urban project, upon the simulation proposal concerning the achievement of this objective. This can be considered as descriptive and experimental, the solutions of the current usage of this space being proposed after having followed a local investigation, deriving perhaps from the needs of the population living in the area (Dincă and Teodorescu, 2013). In the documentary research, in order to achieve this study there has been pursuit the analysis of old maps and town plans from different periods of economic and urban development, as well as cadastre of Bucharest city.
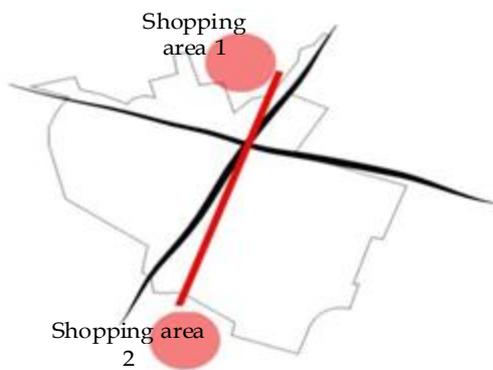

Fig. 1. Locating trading poles 1 and 2 in the extremities of the study area

Sustainable development is evolving toward a diverse concept with four basic components to be analyzed, as for example the economic, social, environmental and cultural environment, plus other secondary elements, including the territorial ones (Petrişor and Petrişor, 2015).

3. Results

3.1. Analysis of malfunctions and functional zoning

A first analysis of the "Faur" zone shows an "amalgamated" state of facts regarding the functions in the area and the type of relationships between them, where there are well highlighted the zones and the following prevailing functions, individual

inhabiting, collective inhabitance, versus the industrial and commercial functions. The presence of the buildings with architectural value (some of them being of cultural heritage) provides an opportunity for development of tourism as an economic activity, oriented towards the industrial tourism (Polo, 2013).

Fig. 2. Localization of the "Faur" area within the space of Bucharest city

As negative or restrictive elements that have contributed to the preparation of the study and development of the concept of functional zoning change, shall be considered, firstly, the absence of links between the two types of tissue, the tissue with low height regime and big height regime (Fig 4). Also, another restrictive element consists of the sub-dimensioning of area plots and individual housing places.
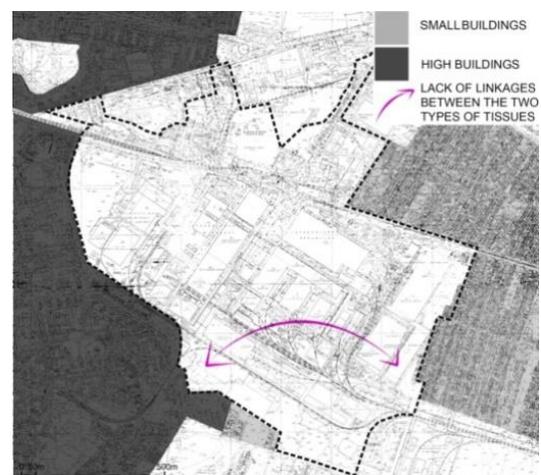

Fig. 3. Details of the "Faur" space being under analysis (Source: Processing cadastre of Bucharest City)
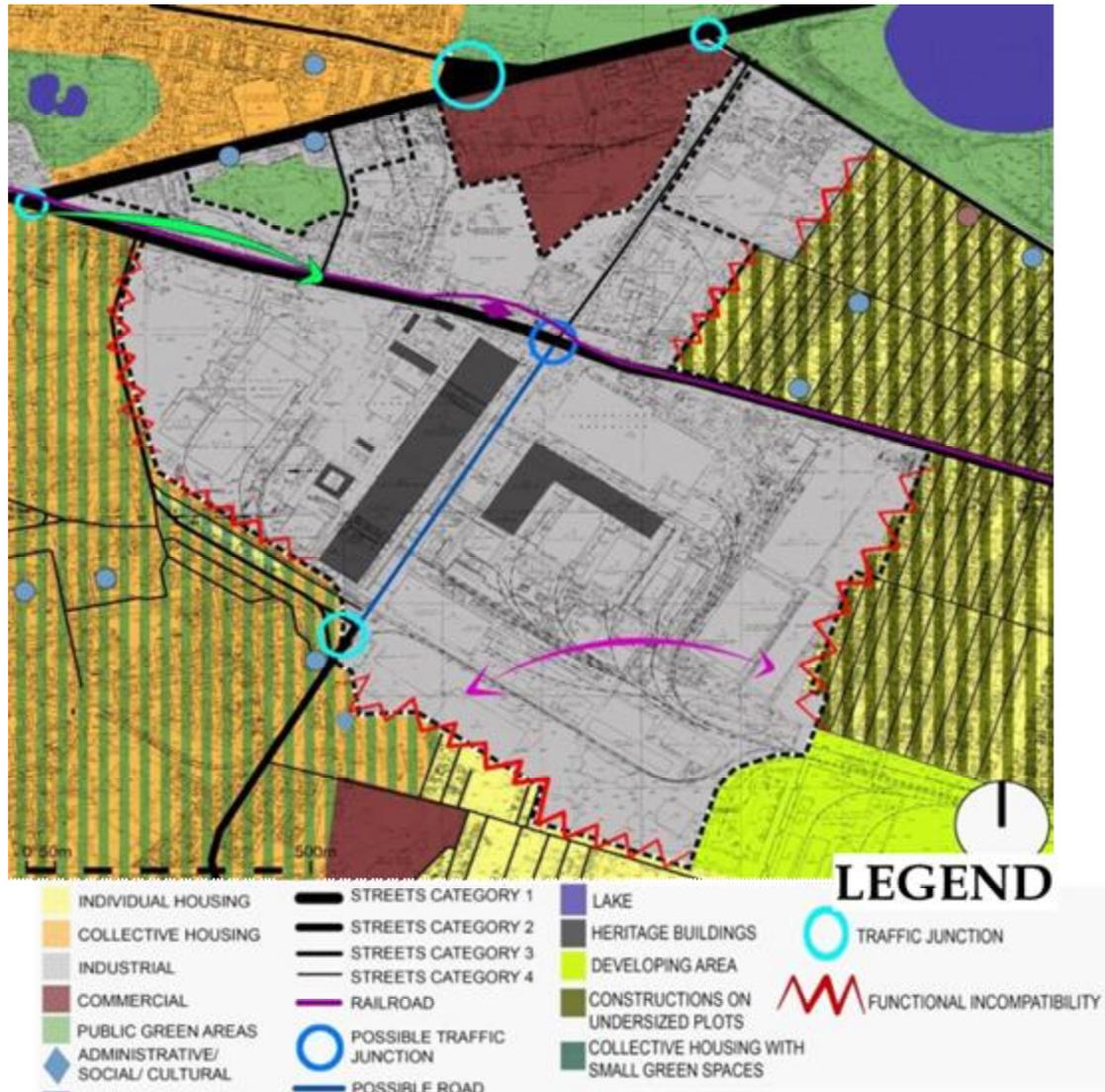
Fig. 4. "Faur" Industrial Area and its dysfunctional limits (Source: Processing cadastre of Bucharest City)

Sub-dimensioning is the major cause in the proper equipment provision possibility, thus being a consequence of low quality in terms of quality of life (Dincă and Teodorescu, 2015).

The land subjected to study lies partially on the former industrial platform, and respectively on other neighboring lands which are currently being occupied by constructions with different functions (industrial mainly), unoccupied land lots, road and pedestrian areas, as well as other secondary functions.

The studied area has an advantage given by its position in the city, in terms of connectivity with the tissue of the main street of the city, due to the former industrial activities (that requires a good road and railway connection). But in the present there have been identified many mal-functions regarding the connection of the studied land with the local tissues of the street and neighboring region, malfunctions of the spatial configuration and dysfunctions of the functional programming.

An urban analysis of Bucharest city pays attention to certain areas which today de-structuralized image. Mostly, there are spaces occupied by industrial buildings, which along with the

political and economic changes of 1989 have ceased activity (Teodorescu *et al.*, 2004). In this context, by a multi-criteria analysis, on the purpose of creating a model (proposal for valorization of these places), l chose, for analysis, an area (with a particular character, feature and function within the city) in the eastern sector of Bucharest, belonging to Pantelimon neighborhood (Fig. 2). Accessibility to the road infrastructure is easy, being in the vicinity of the subway ("Republica" Railway Station), tramway and omnibus lines. A specific feature of the area is given by the natural environment elements that will be used and included in a system of relationship/connectivity with the other green spaces arranged from close proximity (peri-urban area) and implicitly within the city.

There must also be an optimum ratio between the spaces occupied by buildings (irrespective of their utility) and green spaces, which can offer more a quality added value for the urban environment (Petrişor, 2015).

Another aspect, considered a configurative-spatial dysfunction is identified between the tissue of the buildings with low height and that of the high-altitude one, where there is not any visible linking, transfer or an intermediate area of takeover/ connection of those two height regimes, in the final plan of the study this dysfunction being eliminated.

3.2. Proposals for the redevelopment/ rearrangement of "Faur" industrial zone

"Faur" industrial zone (Fig. 3) can today represent a space with multiple possibilities of usage. Thus the study comes up with proposals after having been reviewed a number of specific

indicators, taking into account local biodiversity (Fig. 4). In this sense, one can achieve a proper relationship between the urban environment created and the local biodiversity specific and sustainable (Cobzaru, 2015; Pintilii *et al.*, 2016).

The study represents a proposal synthesis (Fig. 5) of the redevelopment/ rearrangement of "Faur" industrial space, on residential and tourism purpose, industrial landscape transformation into dwelling space (Fig. 6), keeping also parts of that exterior image of the industrial objectives and heritage buildings, with clear orientation, in this case, towards the development of the tourism industry (Peptenatu *et al.*, 2012). You have to keep in mind the height regime of the buildings, too, as well as the existence of green space in the area (Fig. 7).

The proposal of the study aims at the development of the following elements:
- Creating residential spaces-collective inhabitance spaces, with mix height regime, adapted to the local context, with gradual passing, through areas of transfer (insertions of green spaces). Arrangement and valorizing of the heritage buildings, their inclusion within programs and projects based on the industrial tourism;
- Functional re-conversions of these constructions and completion of administrative, social, health, education, offices and commerce. All these will complete the urban area picture of the studied zone;
- Green space system completes the scenery, from the point of view of individually defined and punctual usage, but also within the urban compositions.
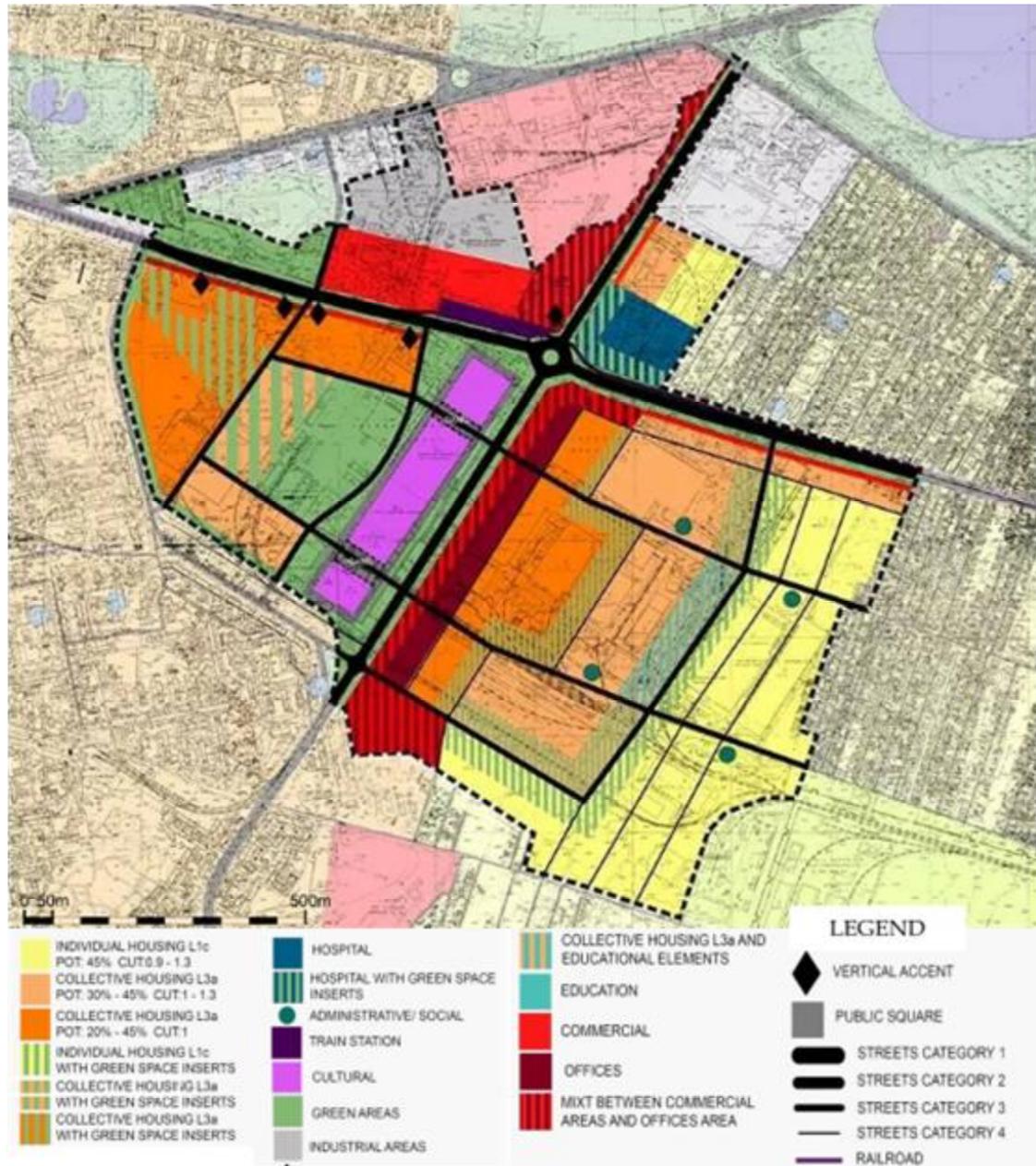
Fig. 5. Proposals for valorizing of "Faur" industrial area (Source: Processing cadastre of Bucharest City)

The state of degradation is very high and a redevelopment would involve a very high cost. Partial destruction or major damage of some constructions which could have real estate or institutional function, require for quite large amounts of money dedicated to renovation. These amounts of money could be saved through policies of cultural heritage of the local administration, by Government measures and European sustainable investment projects. By restoring the building constructions (in particular those of habitation) with great architecture (in this case of Communist imprint architecture) one may see the improvement of the urban environment and quality of life (Altes, 2014).

Aggressive interventions upon the central spaces, change, on indefinite term, the aspect and the historic landscape features of these spaces (Lucca and Pimenta, 2015).
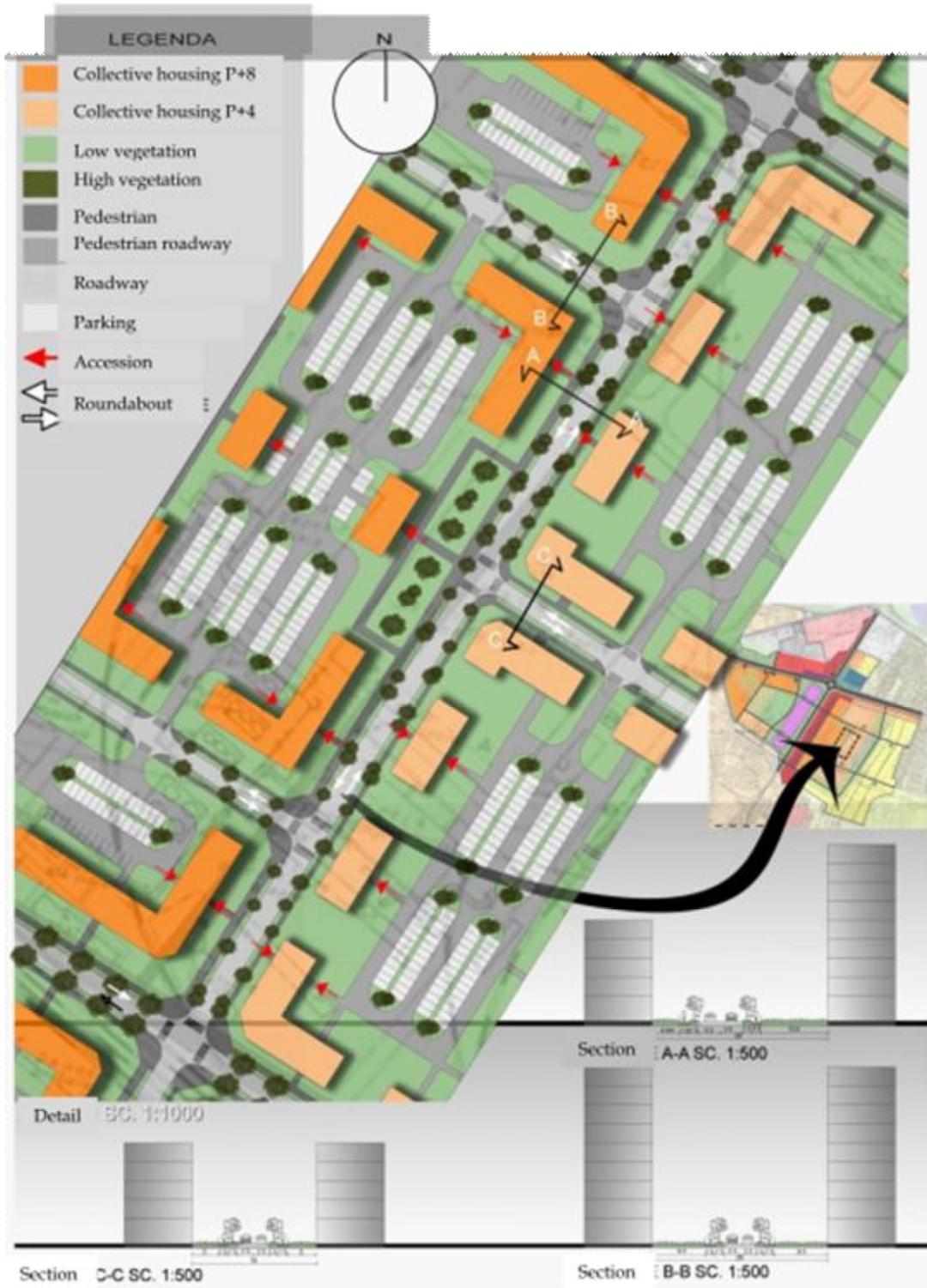
Fig. 6. Local space planning (Proposal detail)

The studied area offers a tourism function that could be valorized by high-lightening their cultural and architectural heritage potential (Chubarov, 2015). This can be done through joint effort of the professionals in the field (Cavallo *et al.*, 2014).

Urban Segregations seem to be inevitable. Material situation of the inhabitants, their revenues generate creation of villa residential areas with distinct architecture, unfortunately situated in an amalgamated system, in the case of the cities with rich history (Tighe and Ganning, 2015).

Fig. 7. The ratio of height and green spaces (Proposal detail)

4. Conclusions

The studied area and the specific territorial processes identified here, represent classic examples of restructuring of the economic activities, developed on the purpose of generating

multiplication effects that should recommend the capital city as the most important economic center of Romania.

After 1990, the industrial platforms, after a short period of economical activity growth, have entered a functional restructuring process. The industrial units have gradually reduced their activities, making available great surfaces of land, which progressively changed destination.

Urban restructuring is a natural process of adapting the system to contextual dynamics which are hard to project/foresee. The studied zone is a relevant example of restructuring an industrial platform, which is not anymore 'finding' itself among the complex of needs and expectations regarding the present urban comfort.

The change of perception upon the inhabitance conditions has generated a growth of request for individual inhabitances with high degree of comfort, so that the former industrial platform might become a space with high level of residential and recreational utility, according to the urban requests of Bucharest city within the current period.

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