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NEED FOR UPDATING OF REGULATORY REQUIREMENTS TO THE GREEN SYSTEM OF THE CITY OF SOFIA

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ABSTRACT

In recent years, the imperfection of the legislation in the field of spatial planning has become apparent, as can be seen especially in large cities and resorts. Sofia, as the capital of Bulgaria and the largest city in the country, has collected most of the negatives, and they are very clear about the development of the Green System of the city. This, together with advancing global climate change, calls for a new approach and the efficient use of green spaces to improve the city's phytosanitary status.

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The General Development Plan of the city of Sofia, adopted in 2008 [1], divides the territory of the city into Development Zones with characteristic development indicators for each of them. For its time, this is a good approach and aims to set clear regulations in the structure of the territory, allowing for clear and accurate planning, with clear prospects and expectations. Unfortunately, the regulatory framework is constantly changing and is not fixed at the time of establishing the Master Plan. A number of laws and regulations continue their unpredictable development, supplementing new requirements that could not have been foreseen at the time, and most often at the expense of the "degree of greening" indicator. One of the examples that illustrates this problem is the Ordinance adopted in 2018 for planning and design of communication and transport system in urban areas [2], according to which the property must be provided with bicycle parking spaces, which is not provided in the ratio of the built-up and green areas to the separate development zones and has to be at the expense of the green areas.

Another, insufficiently considered point is the introduction with the Master Plan of mixed-use areas, Mixed multifunctional zone with reduced parameters and Mixed multifunctional zone mainly for the suburban area, which both allow different uses of the properties falling into them, but are not pluralistic enough and preserve the structural indicators, most often in terms of Density of construction - 40% respectively Minimally landscaped area - 40%, and in Mixed multifunctional zone mainly for the suburban area, even reaches a building density of 60% versus against a maximum of 30% landscaping, which often makes the achievement of the required landscaping area impossible when realizing the maximum construction and the necessary infrastructure. For example, a commercial site in the Mixed multifunctional zone with the maximum allowable construction, leads to the need to build parking spaces on a significant area. A similar example could be given with the construction of a logistics base or sports hall, all sites that need serious parking spaces or adjacent infrastructure. At the same time, the green areas in these sites are either not used for their intended purpose, or this happens sporadically, which makes it inexpedient to achieve them at any cost. In a future, updated Master Plan, this should be taken into account by introducing more flexible tools for the implementation of the elements of the green system in the city, by regulating a mechanism for compensatory landscaping, which will stop the bad

practice for construction of inefficient green areas (green parking lots on a grass joint, vertical landscaping on fences, grassed parking elements, etc.) at the expense of a quality built environment aimed at the direct user, namely the residents of the city. At the same time, the necessary landscaping in mixed-use areas or industrial zones could be achieved following the example of a number of European cities, by requiring unrealized green space to be achieved in the form of vertical and roof landscaping multiplied by 1.2-1.5 or realized in municipal terrains for newly built parks and gardens.

In our country at present, roof landscaping is allowed only in central development zones, and vertical landscaping is not regulated by law and oral regulations of officials from the administration in some areas of Sofia allows up to 10% of landscaping area, reduced by a factor 0.8, and in other areas it is not allowed at all. This can be seen as a very serious shortcoming at a time when the topic of global climate change and global warming is becoming more and more relevant. At a time when the urban population is growing in every minute, cities are becoming more crowded and turning into heat islands, and Sofia is no exception. At present, the capital is not only lagging behind, but even going in the opposite direction of world trends. Already in the first decade of the 20th century, Vancouver, Montreal, Paris, New York and a number of global cities have obliged to build green roofs in new public and industrial buildings and part of the energy they use to be from renewable sources. At the same time, the Sofia Municipal Council sent a letter of instruction to the regional administrations and the "Green System" Directorate:

- Green roofs to be built only in the central zones regulated in the General Development Plan;
- Green roofs with a soil layer thickness of less than 30 cm should not be considered green areas, which in practice crossed out the extensive roofs;
- Green roofs with a soil layer thickness of 30 to 60 cm to be multiplied by a reduction factor of 0.6, which in practice complicates and increases the cost of construction very much and makes green roofs an undesirable element of the urban landscape.

While in the city of Sofia, in 2021, green roofs and vertical landscaping systems are still an undesirable element, Madrid in 2017 adopted an ordinance planning to 2050. to increase its green areas by 30% with the help of roof and vertical landscaping, as experts say that this will reduce the average annual temperature by 2oC, increase humidity by 5-8%, reduce dust and save on ventilation and heating between 4 and 6 billion euros.

Another problem that exists in the central area of Sofia is that most of the parks in the city are or have the potential to be objects of immovable cultural heritage, and there are no specific texts in the Cultural Heritage Act addressed to their protection, and adequate training of landscape architects for these challenges.

A number of shortcomings and ill-conceived solutions that harm the green system can be identified [7] in many regulations aimed at building various elements of it - such as Ordinance № 1 safety of playgrounds or the Ordinance on accessible environment.

Against this background and in the context of global trends, the need to update the regulations dealing with the green system of the capital is becoming increasingly apparent. It is imperative that this is done in accordance with the main aspects of sustainable development, namely environmental, social and economic, by developing synergistic models that will largely enable the city to take a breath and focus on modern development and planning and others systems in the urban organism.

REFERENCES

1. General Plan of Sofia Municipality adopted by decision №697 of protocol 51 / 19.11.2009 and decision №960 / 16.12.2009 by Council of Ministers.
2. Ordinance № RD-02-20-2 of 20 December 2017 on Planning and Design of the Communication-Transport System of Urbanized Territories.
3. Law on Territorial Structure. In force from 31.03.2001, (amended and supplemented, SG No. 51 of 5 July 2016).
4. Evrev, P. About the "Development zones" in the general development plans. The City.bg, Sofia, 02.08.2009.
5. Kovachev, A. Urban planning. LTU, Sofia, 1999.
6. Mihailov, T. Problems in Conservation of Cultural Heritage of Garden and Park Art, VII scientific conference with international participation "Modern technologies in the cultural and historical heritage", 2019 Volume 7, Ed. of TU Sofia ISSN 2367-6523.
7. Mihailov, T., The Flooring in Playgrounds – Types, Application and Standards, XXI MNC "Construction and Architecture" VFU'2021, Sofia, ISBN 978-954-331-117-0, pp. 212-220.