

Evaluation of Landscape, Decorative and Functional Significance of a Green Area ‘Sevastopol Park’ in Minsk

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Straipsnyje yra iškelta viena iš svarbiausių žmonijos problemų, kaip išsaugoti aplinką ir racionaliai panaudoti gamtinius išteklius. Svarbus šios problemos aspektas, kaip pagerinti želdynų planavimo, šiuolaikinių miestų apželdinimo kokybę bei sukurti palankias gyvenimo sąlygas juose. Tinkama želdynų priežiūra miesto, turinčio didelį antropologinį krūvį, galima tik tada, kai yra atsižvelgiama į jo natūralias ekosistemas, jų poreikius ir galimybes, remiantis ankstesnės teorinės ir praktinės patirties tyrimu ir analize ekologijos, želdynų vystymo ir želdynų dizaino srityse.

Reikšminiai žodžiai: apželdinimo kokybė, želdynų planavimas, natūrali ekosistema, želdynų priežiūra, Sevostopolio parkas.

Introduction

One of the most important problems humankind now faces the problem of environmental protection and rational use of natural resources. An important aspect of this problem is improving the quality of laying out green areas, landscaping of modern cities and creating favourable conditions for people to live in them.

Green landscaped plantations play a leading role in the general system of optimizing environment of big industrial centres characterized by a high level of urbanization. Parks, public gardens, boulevards and other urban green areas are obligatory elements of the cultural landscape of our cities, as they form the basis of sanitary-hygienic and microclimatic conditions of people's life. They occupy a considerable part of settlement areas of populated localities, have a considerable influence on the formation of their landscape and determine their architectural structure to a great extent. Therefore laying out green areas in cities is an important element in the complex of town planning and urban development.

As green areas are never finished as, let's say, buildings are, planning and creating of green areas as well as their maintenance is a continuous and complicated process. Maintaining a stable state of city green areas in conditions of a high anthropogenic load of a big city is possible only when the needs and the possibilities of its natural ecosystem are taken into account and only on the basis of studying and analyzing the previous theoretical and practical experience in the fields of ecology, green areas development and landscape design.

Subject of research

The subject of research study was a green area of ‘Sevastopol Park’ which is situated in the north-east of Minsk. It is an area of a considerable square (more than 100 hectares), a landscape complex extending from north-west to south-east which is more than 2 km long and 300–600 m wide. ‘Sevastopol Park’ is confined by streets of different significance, a driveway, as well as an area of office and apartment blocks.

The necessary information on the green area of ‘Sevastopol Park’ was gathered by method of route survey in 2 stages: reconnaissance and detailed evaluation.

The reconnaissance route survey performed at the first stage let characterize the territory according to landscape types, kinds of its functional use, levels of recreational load and determine both its characteristic features and specific peculiarities. At this stage the green area in question was

divided into basic record plots with different relief, pathways network, constructions on their territory, landscapes types, species composition and the density of plantings. This served a basis for further detailed research.

The second stage of the research included a more detailed study of the record plots with photographing their characteristic features. The evaluation of the state and the decorative value of landscapes were made on the basis of general examination using the generally accepted criteria and methodological approaches.

As a result of an on-site survey of record plots materials have been gathered from every plot that made it possible to evaluate the condition of the plantings. The materials include information on:

- characteristic landscape peculiarities including information on landscape types, their structure, location and configuration;
- functional use of the territory with indication of a group of intercity green plantings;
- characteristic features of pathways network, depicting accessibility of landscape structural elements and including data on its density, surface and state;
- environmental factors unfavourable for using the territory for recreation;
- the territory's suitability for recreation purposes;
- characteristic peculiarities of plantings including data on compositional elements in which they occur and taxational indices;
- phytosanitary condition and decorative value of plantings;
- main disturbing factors leading to deterioration of plants condition;
- reasons for decrease of decorative value of separate landscape compositional elements.

Results

The green area of 'Sevastopol Park' is of considerable environment-forming and recreation importance for the adjacent area of apartment blocks. The park's south-eastern part joins the green zone around Slepianka water system thus being part of a landscape and recreation complex which provides favourable environment in this part of the capital. The great ecological importance of this area is conditioned not only by its size, location and a high degree of wood plants in its landscapes, but also by a network of drinking water supply objects on its territory (water intakes and water-lines). All the abovementioned lets consider 'Sevastopol Park' to be an object of a special environmental status.

In accordance with the existing urban development norms the given green area has at present no clearly established category status. The functional purpose of plantings in the indicated area is varied.

Nomenclature ownership of the green areas is at present regulated by the "Rules of organizing and maintaining green areas in cities of the Republic of Belarus" and "Instruction on the order of state registration of plant world objects on the territory of populated areas and their maintenance".

This legal basis lets classify the plantings in the green area of 'Sevastopol Park' as follows:

1. Its greatest part as for its square refers to the group of "General use plantings".
2. Areas under power lines, neat water supply sources and utility water-lines refer to the group of "Special-purpose plantings".
3. Green strips along streets and roads belong to the group of "Plantings in the streets and roads of built-up areas".
4. A small part of the territory occupied by the Republican children rehabilitation centre, comprehensive school for children with hearing disorders №14 and enclosed sports grounds belong to the group of "Plantings of limited use".

In connection with low intensity of maintenance a great part of plant communities that have formed here are close to natural ones in their structure. Meanwhile the internal and external

appearance of any of the plantings is far both from the natural environment and from a cultivated park landscape.

In general it should be noted that from the ecological point of view a considerable part of plantings in the green area of ‘Sevastopol park’ maintains the stability of their features and functions and can naturally be referred to the category of stable balance. The stability of a great part of the plantings has been disturbed, but they are in the state of a reversible change of features and functions. An inconsiderable part of plantings has lost its stability and is in the stage of digression and ruin; negative changes in their features and functions are irreversible.

Despite the fact that composition elements of landscapes of this territory contain a certain amount of dead-wood, dying and weakened trees, practically all the plantings can be referred to healthy ones. Examples of woody plants and shrubs attrition are conditioned by processes of their natural ageing, are a result of competitive oppression in the process of plantings development or of a physical damage of a natural (windfall, windbreak) and anthropogenic character. From the point of forestry, the majority of dense stand plantings is developing successfully and grows in 1–2 growth classes. The thickness (density) of stand in plant groups varies within the area considerably – from low and close to the norm to high (especially in young growth of shrub wood).

Discussion

From architectural and artistic point of view the landscape value is ambiguous and mostly not very high. ‘Sevastopol Park’ has all types of landscapes (closed, semi-open, open) and accordingly all types of plantings (dense, thick, single). However, their location is not ordered, is not united by a common idea. Neither ‘Sevastopol Park’ as a whole nor its separate parts have compositional centres. The existing landscape compositional elements as a rule don’t have logical completeness and are therefore characterized by lack of expressiveness when seen from any distance and any angle. The pathways network in most parts of the territory is of a utilitarian-transit character. All this makes an impression of incompleteness and untidiness. Therefore “Sevastopol Park’ can at present not be referred to any of the main types of green areas.

Ornamental value of the plantings of ‘Sevastopol Park’ is as a rule not very high either. Compositional elements that stick to one’s memory would include a birch planting in the northern part of the park and a complex of semi-open and open landscape compositions in the south-eastern part. Even if it is assumed that the greatest part of single compositional elements in the landscapes of this green area, not having high ornamental value, can not be referred to the category of low ornamental value either, complex evaluation of the plantings in general lets refer them to the category of those requiring reconstruction.

The landscapes of the green area of ‘Sevastopol Park’ with the exception of its south-eastern part are little adjusted for people’s recreation and are not maintained well enough throughout the year.

Conclusions

The object of the city’s landscaping infrastructure and services does not perform its recreation, sanitary-hygienic and aesthetic functions to the full. An in-depth study of the plantings of the green area ‘Sevastopol Park’ creates scientifically grounded pre-conditions for carrying out purposeful reconstruction.

The data collected shows the necessity of carrying out complex upgrading and development of the given green area which is to considerably increase its recreation value. In order to increase the effects of the green plantings’ ornamental and aesthetic, sanitary and other functions useful for settlement zones it is necessary to carry out wide-scale renovation and reconstruction.

Minsko Sevastopolio parko kraštovaizdžio dekoratyvumo ir funkcionalumo vertinimas

Santrauka

Sevastopolio parko želdiniai buvo klasifikuojami pagal jų tipus. Buvo įvertintas jų stabilumas, nustatyta landšafto ir dekoratyvumo vertė. Pateiktos vietovės rekreacinės vertės kėlimo rekomendacijos