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The Importance of Urban Planning and Landscape Design in the Process of Creating 'Great Places' for Citizens - Case study of Park Macedonia 1

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ABSTRACT

Creating places where urban life is better and of a higher quality is one of the main tasks of the modern society. These places are called 'great places' and urban parks have all the predispositions to be one of them. Due to the functions they perform, they are a necessary part of every city. Urban planning and landscape design are very important in the process of creating 'great places' for citizens. With their proper use, successful green spaces are created, which are functional and aesthetic at the same time. This is especially important since green areas in the urban environment are becoming less numerous. The subject of analysis in this paper is urban planning and landscape design through the example of Park Macedonia 1 in Skopje, North Macedonia. The park is analysed from different aspects (functionality, safety, plant species selection, layout of the plants and the use of basic principles of landscape design) to determine if this place is a 'great place', i.e. whether this place at the same time functional and aesthetic. The results show that Park Macedonia 1 is a 'great place'; however, there are some gaps in its urban planning and landscape design. These gaps are reflected in the safety of the visitors and the functionality of the park, made in the process of plant species selection and landscape designing of the park, i.e. entrances and exits, layout of plants, incorrect use of focal points, and simplicity, rhythm and line as basic principles of landscape design. Analyses of Park Macedonia 1 in terms of urban planning and landscape design and the proposals for corrections can be used in the future design of 'great places' in urban areas like Skopje.

Keywords: landscape architecture; Park Macedonia; successful places; urban forestry; urban greenery; urban parks

INTRODUCTION

Urban parks, commonly recognized as defined areas of open space predominantly featuring vegetation, are typically designated for public use (Konijnendijk et al. 2013). They are one of the most important components of cities with a role of a mediator between humans and nature (Sadeghian and Vardanyan 2013). As a part of nature and green spaces, urban parks directly affect the life of modern people and improve their physical and mental health by reducing stress and mental disorders (Annerstedt et al. 2012, Thompson et al. 2012). The extent to which this effect is noticeable depends on the park itself, specifically its reputation as a premier destination. In fact, it depends on the fact whether this place represents a 'great place' or not. That is the reason for the importance of urban planning and landscape design as part of the process of creating 'great places' for citizens. Cushing and Miller (2019) in their book 'Creating Great Places' discussed designing urban environments where all people thrive and demonstrated how designers can create 'great places' that are inclusive, sustainable, and salutogenic. 'Great places' must provide various benefits, making space functional and aesthetically pleasing, combining urban design and landscape architecture experiences (Siggaard Andersen and Harvey-Crowe 2024). If 'benefits' are defined as something that promotes well-being (Merriam-Webster 2024), and human well-being is often linked with nature (Russell et al. 2013, Taylor et al. 2018, Richardson et al. 2021), this further confirms the importance of parks in the urban environment. However, the relationship between

urban nature and human well-being usually goes unnoticed, especially in cities where planners are more attached to economic growth than social interactions (Ayala-Azcárraga et al. 2019). Due to this, the work of planners and landscape designers is increasingly appreciated. Forced to create in the modern densely built environment, their work becomes more and more difficult. Design is a highly complex and sophisticated skill and an important human activity because it links theory and practice and bridges scientific and creative undertakings when tackling ill-structured, open-ended problems (Lawson 2006). The three-dimensional and environmental field of landscape design requires the designer to produce beautiful, practical, and well-functioning end products (Kara 2013). But do planners and landscape designers always manage to achieve that?

In this paper, Park Macedonia 1 in Skopje, North Macedonia is analysed. The goal is to determine whether this place is a 'great place', i.e. whether it is at the same time functional and aesthetic, creating a sense of well-being among visitors, offering a space for enjoyment and recreation (Konijnendijk et al. 2013, Peinhardt 2023a), socialization (Peinhardt 2023b) and positive impact on their mental health through safety, and proper and aesthetic design (Stigsdotter 2005).

MATERIALS AND METHODS

Location (Research Area)

The subject of research in this paper is the urban planning and landscape design of Park Macedonia 1, which is located in the municipality of Karposh, the settlement of Kapishtec, in the city of Skopje, North Macedonia. Park Macedonia 1 covers approximately 25 000 m², bordered to the north by Metropolit Teodosij Golaganov Boulevard and to the south by Jurij Gagarin Street. Established in 2012, the park has undergone enhancements over the years, including the addition of a cycling track for children in 2016 and various plantings adding up to the present vegetation. Given the densely developed nature of the Kapishtec settlement and the scarcity of large parks in the area, Park Macedonia 1 holds significant importance for the local community (Figure 1).

Field Data Collection and Analysis

The used methodology has a multidisciplinary character. The analyses include qualitative (visual, textual and graphic interpretation through the use of geographic information systems) and quantitative interpretation (processing of the obtained qualitative data). The following methods were

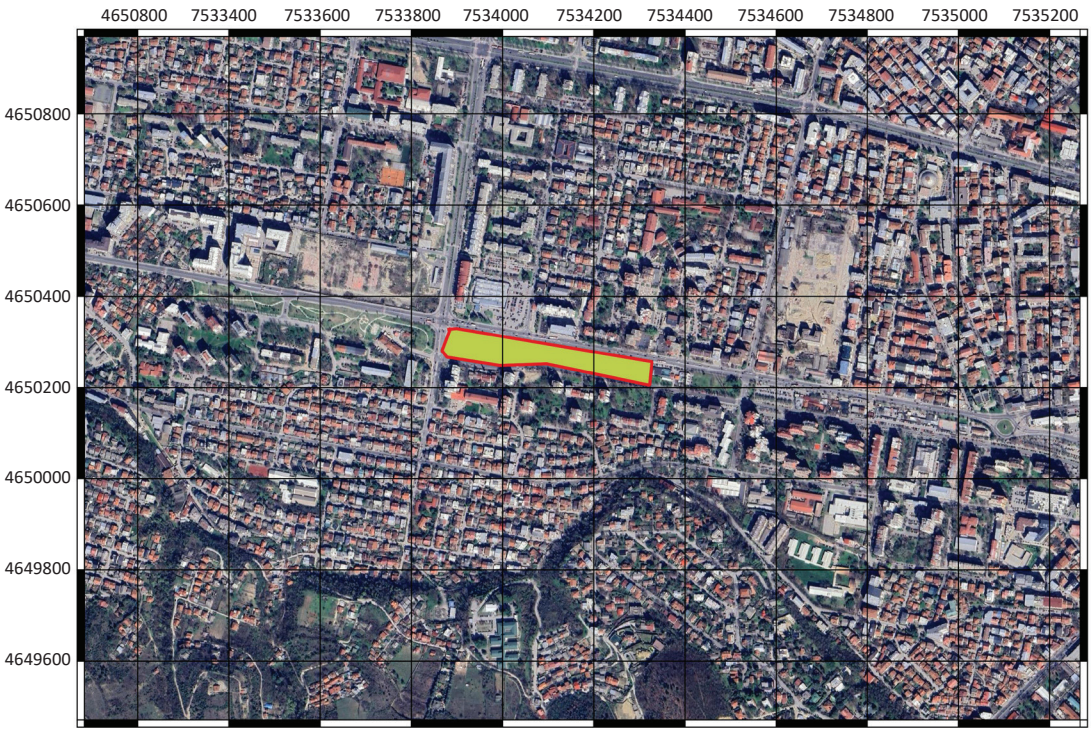

Figure 1. The area of Park Macedonia 1: QGIS (Coordinate Reference System MGI 1901 / Balkan zone 7, EPSG:6316), Google Satellite, 2023.

used in the field research: visual observation of greenery (the condition of the plants – such as instances of dryness and disease), and the existing condition of the whole park, marking all individual trees and equipment of the park, and identification of the dendroflora. Trees and the equipment of the park were marked using the GPS office brand GARMIN GPS MAP 66sr and computer processed with the help of QGIS software (Quantum Geographic Information System). This method enabled the creation of precise maps and ideal graphic interpretations, clearly illustrating the park, its features and the layout of the plants and equipment, for effective further analysis.

The identification was based on the scientific plant names from the plant databases of World Flora Online (WFO 2024), Royal Botanic Gardens, Kew (Kew 2024) and The Royal Horticulture Society (RHS 2024), to the lowest taxonomic units (cultivars and varieties) of the species.

The analysis examines several key aspects, representing criteria for evaluation of the park to determine whether it is a 'great place' or not:

- The functionality of the park concerning the park elements, which offer different activities to different users (their presence in the park and the specific user groups they are designed to serve),
- The safety of its visitors,
- Plant species selection as an important factor in the functional and aesthetic appearance of the park itself (the condition of the plants – such as instances of dryness and disease, as well as the choice of vegetation, evergreen and deciduous species, to ensure aesthetic and ecological effectiveness throughout the year),
- The layout of the plants related to the functionality of the park,
- The layout of the plants concerning the aesthetic appearance of the park according to the rules of the basic principles of landscape design (balance, focalization, simplicity, rhythm and line, unity and proportion).

The data were collected in the period from the beginning of March to the end of August 2023.

RESULTS AND DISCUSSION

The Functionality of the Park

Park Macedonia 1 is one of the newly established urban parks in Skopje, composed of different elements or different parts, i.e. a recreational part with outdoor gym, several children's park elements, parts for intimate rest, a cycling track for children, a children's playground, a pet park and a white gravel trim trail (Figure 2). Each part offers different activities.

Urban parks have been viewed as an important part of urban and community development rather than just as settings for recreation and leisure (Konijnendijk et al. 2013). Experimental studies show that physical activity in natural

Figure 2. Different parts, i.e. different elements of Park Macedonia 1: QGIS (Coordinate Reference System MGI 1901 / Balkan zone 7, EPSG:6316), Google Satellite, 2023.

environment may be better for mental health than activities elsewhere (Mitchell 2013). The possibility of carrying out certain activities makes the park a place which is special and unique. Uses and activities are a reflection of what is possible in a place (Peinhardt 2023a) and are one of the main factors for visiting the place, as well as for the socialization of urban people (Peinhardt 2023b). When we want to create a great public space, in this case, an urban park in a densely built environment, we have to pay attention to satisfy all age groups. Knowing that most activities are the reason why people visit it in the first place, and why they continue to return (Peinhardt 2023c), it can be concluded that this place would satisfy visitors with different interests and of different ages. Recreational part (outdoor gym) and white gravel trim trail are for young and middle-aged people for active rest, pet parks for pet owners, parts for intimate rest (Supplementary Material 1) and many park benches throughout the park are made for all ages for passive rest, and there are different elements for children of different ages, such as children's park elements, a cycling track for children (Supplementary Material 2) and children's playground. These aspects reflect Park Macedonia 1 as a multipurpose and multifunctional green area.

The Safety of the Visitors

Children's park elements and children's playground are well and evenly deployed throughout the park, but there is a real problem due to the incorrect landscape design of the space around the children's playground.

The plant composition, located next to the children's playground, does not visually match the overall design of the park. The plants are densely planted, and many of them are partially or completely dried. There is always garbage and various dangerous insects and reptiles.

Children's safety is the primary consideration, the key principle when selecting a landscape design and choosing plant species and their arrangement (Kopeva et al. 2017). Children are naturally curious and eager to explore, but certain areas of the park can be unsafe for them, especially those close to playgrounds where they may wander. Ensuring safety in public spaces for children's play is essential (Senda 2015, Ma et al. 2022). However, safety is just one aspect. It is important to balance protection with the need for exploration. While it is crucial to guide children away from potentially dangerous areas (Kong 2004), we must also foster their curiosity and desire to explore. In his research about children's play, Hughes (1990) concludes that even though there can be no guidelines for children's play environment, some general criteria can be identified. Among them is to encourage exploration and experimentation. But we cannot encourage small children to explore in an unsafe environment. Therefore, the best choice is to avoid such chaotic, cluttered and fussy plant composition next to children's playgrounds and instead of them, for example, to plan a wide green lawn which will provide safe entertainment for children.

In the south, where the park borders Jurij Gagarin Street, there are four paths to enter and exit the park. There is no pedestrian promenade on this side, and the park directly borders the street. Two of the four paths, which are not connected to pedestrian crossings, are not safe for pedestrians at all (Figure 3a, Figure 3b). Also, there is no full visibility for the pedestrians when crossing the street, due to the position of the trees along the paths (Figure 3).

The safety of the citizens is one of the most important issues and in the process of designing any area, it must be emphasized (Zegeer 2002). It is excellent that the old plane trees are preserved in the newly established park, but some of the paths are made very close to certain individual trees (Figure 3c, Figure 3d) and despite the reduced visibility

Figure 3. Paths for entries and exits, Park Macedonia 1, 2023: **(a, b)** Not connected to pedestrian crossings, with limited visibility; **(c, d)** Connected with pedestrian crossing, with limited visibility.

when entering and exiting the park, the vitality of the plants is also reduced, because these trees are surrounded (from one side) by surfaces of solid materials (paving bricks). The vitality of these trees decreases for a number of reasons, including the reduced surface area for watering and air circulation (Foster and Blaine 1978), but also the damage caused to the trunks during the construction of paths.

Plant Species Selection and the Layout of the Plants

In Park Macedonia 1 there are 418 individual trees of 29 different tree species (Table 1). This number of individual trees, but also the presence of such different types of trees in an area of about 25 000 m², in any case, has a positive effect on preserving and increasing biodiversity.

Locations of all individual trees are marked, mapped and shown in Figure 4. Marking all trees is an ideal way to see the real situation.

Only five tree species are present in the largest number. Of 418 individual trees, there are 91 *Fraxinus excelsior* 'Globosa' (22%), 55 *Platanus x hispanica* Mill. ex Münchh. (13%), 44 *Magnolia kobus x stellate* (10%), 39 *Liriodendron tulipifera* L. (9%) and 32 *Prunus cerasifera* 'Nigra' (8%). Another 157 individual trees or 38% are representatives from the other 24 tree species (Figure 5).

It is great for the image of the park to have plant species in relatively large quantities that will dominate and make the park recognizable, specific and unique. But it can be worrying if certain diseases occur in the most dominant species (Davis 1984, Santamour 1990). In that case, the trees lose their vitality and decorativeness, and their functionality as plants is reduced. In the worst case, they may dry out. However, in the case of the occurrence of a certain disease on the dominant species in one park, the decorativeness and ecological functionality of the whole park are completely reduced. The '10% rule' or '10% solution', which Santamour (1990) writes about, means to not plant more than 10% of any species in a particular area (urban park, for example), although it cannot be a guarantee for long-term stability and aesthetics of the urban forests. The fact is that this rule has not been taken into consideration in landscape design of Park Macedonia 1, where there are two species present in more than 10%. While no disease was observed on *Fraxinus excelsior* 'Globosa' (present in 22%) and fortunately it proved to be quite resistant to biotic and abiotic factors in Skopje, North Macedonia, there is a visible problem with plane trees (present in 13%). Entomological damage from *Corythucha ciliata* (Say, 1832) (sycamore lace bug) on the leaf was determined at *Platanus x hispanica*. This phenomenon has affected all 55 trees, and in most cases, it has extended to 30-40% of leaf mass, although there are cases in which the disease is present on 80-90% of leaf mass, thereby reducing the vitality and greatly the decorativeness of the diseased plants. The sycamore lace bug is one of the most destructive pests of plane trees (*Platanus* spp.) worldwide and this pest is a major nuisance in Europe since plane trees are very popular in parks (Sevim et al. 2013). In 2019, the presence of sycamore lace bug was registered for the first time in urban and peri-urban plane tree populations in Kosovo, whose research was prompted by the observed presence of the same insect on plane trees in North Macedonia (Muja et al. 2021). Both adults and nymphs of sycamore lace bug feed on the underside of leaves and produce small chlorotic stipplings on the upper leaf surface (Halbert and Meeker 2004). This feeding damage reduces the photosynthesis and respiration of host plants, ultimately impacting their vitality and aesthetic value. As a result, the foliage becomes bronzed and leaves may fall earlier, in late summer (Halbert and Meeker 2004), as in this case. The prolonged presence of sycamore lace bug, along with unfavourable climatic and environmental conditions, may kill the trees (Barnard and Dixon 1983).

Table 1. Inventory of the urban dendroflora, Park Macedonia 1.

Tree species	Number of individual trees
Albizia julibrissin Durazz.	8
Betula pendula 'Youngii'	12
Betula pendula Roth	7
Catalpa bignonioides Walter	11
Elaeagnus angustifolia L.	2
Fraxinus americana L.	9
Fraxinus excelsior 'Globosa'	91
Fraxinus excelsior 'Jaspidea'	4
Fraxinus excelsior 'Pendula'	5
Fraxinus excelsior L.	8
Ginkgo biloba 'Globosa'	5
Ginkgo biloba L.	18
Juniperus scopularum 'Blue Arrow'	10
Juniperus scopulorum 'Skyrocket'	21
Liriodendron tulipifera L.	39
Magnolia kobus x stellata	44
Magnolia x soulangeana	1
Metasequoia glyptostroboides Hu & W.C.Cheng	3
Pinus nigra J.F.Arnold	1
Platanus x hispanica Mill. ex Münchh.	55
Prunus cerasifera 'Nigra'	32
Quercus robur (Fastigiata Group) 'Koster'	3
Quercus rubra L.	1
Salix alba 'Tristis' ambig.	6
Sorbus intermedia (Ehrh.) Pers.	6
Tilia cordata Mill.	3
Tilia tomentosa Moench	3
Ulmus glabra 'Exoniensis'	4
Ulmus glabra 'Pendula'	6

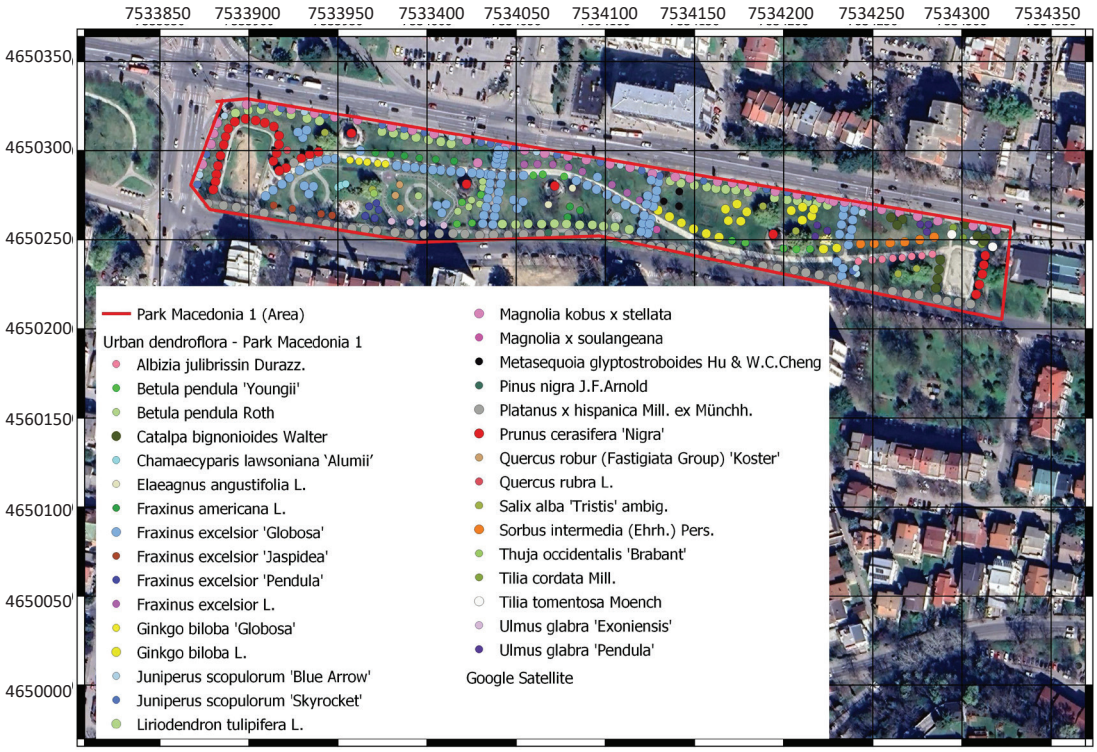

Figure 4. Urban dendroflora, Park Macedonia 1: QGIS (Coordinate Reference System MGI 1901 / Balkan zone 7, EPSG:6316), Google Satellite, 2023.

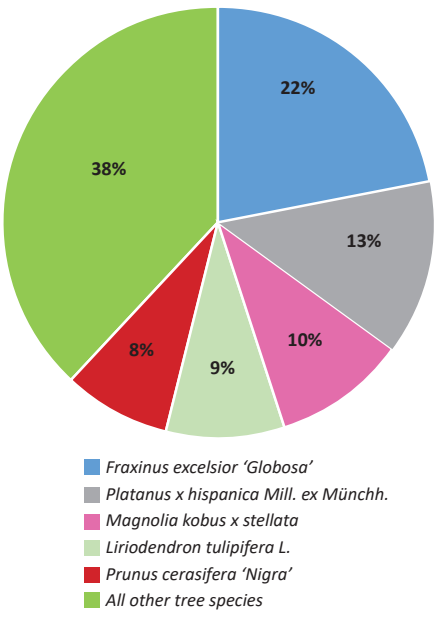

Figure 5. Most common tree species, Park Macedonia 1.

When we talk about the choice of plants, it must be emphasized that out of 29 different tree species only three of them (*Juniperus scopularum* 'Blue Arrow', *Juniperus scopulorum* 'Skyrocket' and *Pinus nigra* J.F.Arnold) are evergreen. Specifically, there are only 32 evergreens (8%) of 418 individual trees. Locations and plant layouts of evergreen and deciduous trees are shown in Figure 6a.

Plant landscapes are fundamental components of the green space of urban parks and are often dynamic, changing throughout the year (Li et al. 2020). Because of that, in landscape designing, we have to take care of how this landscape will look in all different seasons through the year. In autumn, after the leaves fall, and throughout winter, this park is literally empty (Figure 6b). Even though winter is a season with poor plant landscape effects in urban parks (Li et al. 2020), evergreen plants can play a crucial role in landscape dynamics by maintaining greenery throughout the whole year, providing continuity and enhancing the green landscape, especially during periods when deciduous trees are bare (Wang and Zhao 2020). According to Li et al. (2020), the ratio of evergreen tree species needs to be sufficient to enliven the environmental space in winter. It has to be mentioned that evergreen trees should be used not only for aesthetic appeal but also for ecological benefits (Zhao et al. 2017, Orians 2022). There is a way for winter landscape in urban parks to be further optimized, placing emphasis on

the six factors (diversity of plant species, the proportion of evergreen tree species, the morphological characteristics of plants, the ground cover rate, the overall sense of harmony and the colour composition) in the process of landscape planning and designing (Li et al. 2020).

In linear parks, such as Park Macedonia 1, stretched along the boulevards (Blvd. Metropolit Teodosij Golaganov, in this case), it is necessary to have a green belt, like a buffer zone, on the side where it borders the boulevard (the north side). It is one of the ways to get a positive effect on the microclimate with the help of linear greenery (Stipanović et al. 2022). There is also an option that evergreen trees are located right next to the boulevard (Figure 6b), but it is questionable whether these types of plants would perform the function of a buffer zone. The green belt should retain harmful gases and dust from the boulevard and should also reduce noise. Noise pollution is widely recognized to have a significant detrimental impact on health, affecting physical,

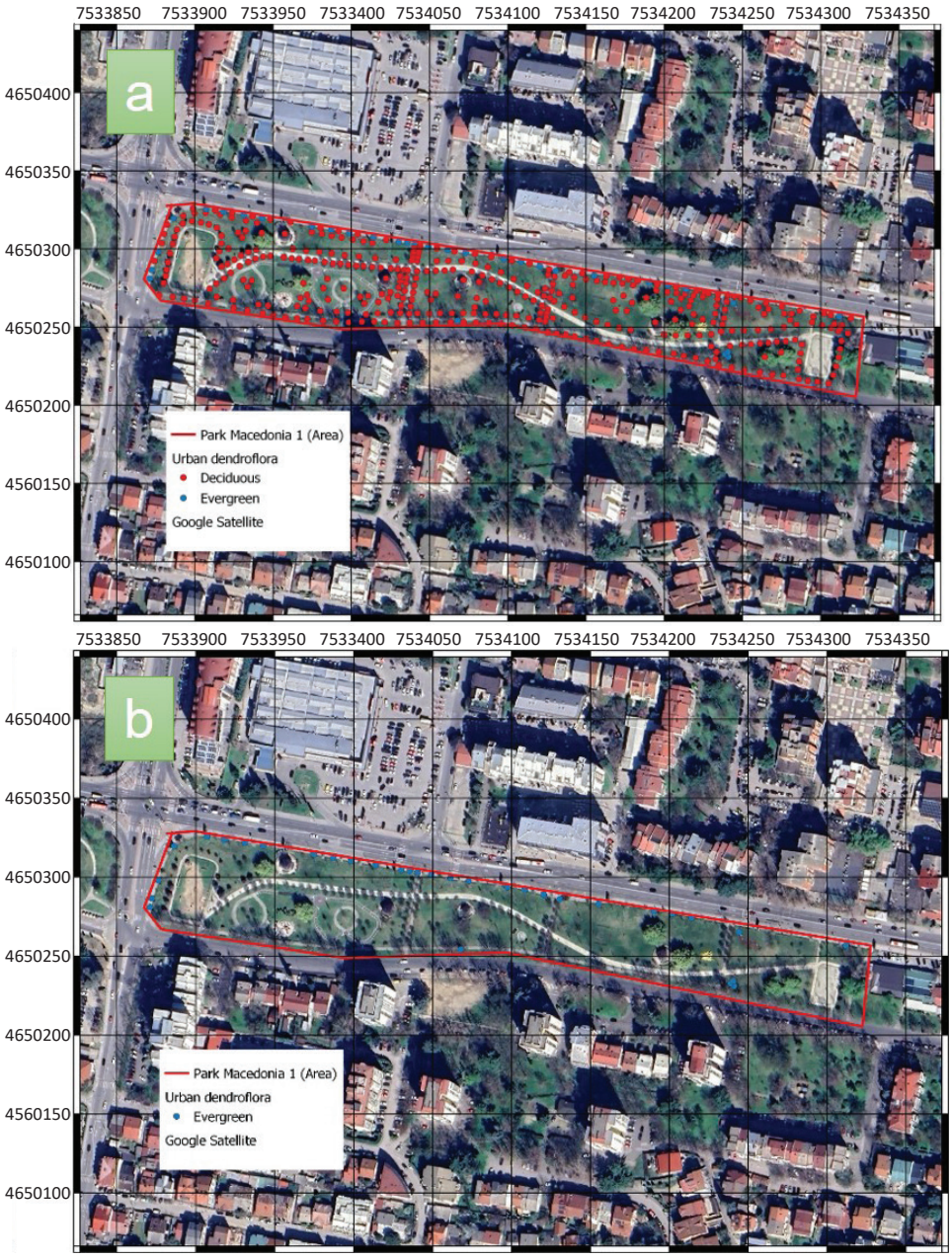

Figure 6. (a) Plant layout of evergreen and deciduous trees in Park Macedonia 1; **(b)** Plant layout of evergreens in Park Macedonia 1. QGIS (Coordinate Reference System MGI 1901 / Balkan zone 7, EPSG:6316), Google Satellite, 2023.

physiological, and psychological well-being (Ozdemir et al. 2014, Millar 2020), but vegetation can play a vital role in mitigating this effect, offering substantial improvements to the environment (Van Renterghem 2019). The park should offer visitors space in nature protected from urban pollutants. It is a misconception that people can enjoy being exposed to urban noise, dust and pollutants just because they are sitting on green grass, and this is definitely bad for their health (Chiarini et al. 2020). However, this can be improved if landscape designers use the right plants for the right purposes. In this case, instead of *Magnolia kobus x stellata*, which grows as small tree, and *Juniperus scopulorum* 'Skyrocket', which is a narrow columnar evergreen conifer with an ultimate spread of 0.5-1 m, evergreen trees with wide habitus and fast-growing deciduous trees with wide canopies should be planted. This is a good way to reduce noise and air pollution and ensure a pleasant stay for visitors, and which, on the other hand, will have a positive effect on their health. Even Shotaroska et al. (2019) in their research about Macedonia Park discussed these two species. It was mentioned that they are planted along the path on the side of the boulevard, too distant one from another, and their primary purpose is therefore not fulfilled.

In Park Macedonia 1 there are 225 roses (Rosa Floribunda Group). For their proper growth, they need full sunlight, but only a small number are planted in a sufficiently sunny location. Most of them are planted under the canopy of trees. Almost all are in bad condition, and some are completely dead. Also, there are plants planted between the roots of a large *Salix alba* 'Tristis' tree (Figure 7), which do not have the conditions for proper growth from several aspects, such as the space required for growth and development of the root system, and sufficient sunlight for some of the plant species.

Landscape designers should never plan planting of certain plants in places that do not have suitable conditions for growth. These plants will never give the potential benefits we are expecting, neither decorative nor ecological.

The Use of Basic Principles of Landscape Design

Balance, focalization, simplicity, rhythm and line, and unity and proportion are basic principles of landscape design. They provide guidelines and it is essential to know how to use them through the designing process, in order to create functional, aesthetically pleasing and beautiful landscapes (Hansen 2010). Understanding these principles is crucial for designing landscapes, particularly in the urban environment (Memlük 2012).

In Park Macedonia 1, certain gaps in the design are noticeable in the application of some of the basic principles of landscape design, such as rhythm and line, focalization and simplicity.

The rhythm and line design principle gives a landscape a sense of movement; it is what may draw one "into" the landscape and what makes landscapes calming to our soul (Sandborn 2015). However, this basic principle should be used carefully. It may be boring, with the feel of monotony, if the same form and the same colour are repeating all the time, such as in Park Macedonia 1 for example (representatives of *Fraxinus excelsior* 'Globosa', planted in line, extend along

Figure 7. Plants between the roots of *Salix alba* 'Tristis' tree, Park Macedonia 1, 2023.

paths and white gravel trim trail, almost along the entire length of the park) (Figure 4). On one part they are related to *Ginkgo biloba* 'Globosa' in the same line, but again there is a repetition of the same or similar form and colour (Figure 4). It would be better to use different colours and forms, from time to time. Short breaks with *Prunus cerasifera* 'Nigra', because of different leaf colour, between the *Fraxinus excelsior* 'Globosa', or short breaks without plants (free spaces) are good ways to break the monotony with the help of a complex rhythm instead of a simple one.

The focal point is the most powerful element in any design, attracting the viewer's eye first (Sandborn 2015). However, landscape designers need to avoid overusing focal points, as it can disrupt the simplicity of the overall design (Sandborn 2015). In that way, the landscape becomes tiring for the visitors, which is contrary to what is expected from a 'great place'.

Looking at the park as a whole, the four parts for intimate rest with benches and arbours with decorative creeping plants, red plum in the middle and design of low symbolic hedges are excellent focal points. They are a strong element that builds the image of the park, but they also offer comfort for the visitors. Comfort and image send a powerful message about the place, and are a critical part of what makes it a 'great place' (Peinhardt 2023c).

When analysing certain parts of the park, a problem related to focalization has been noticed. More precisely, specific forms such as pendula forms, in this case *Betula pendula* 'Youngii' and *Ulmus glabra* 'Pendula', could be the best choice for focal points. Group of pendula forms or planting them in a row by the trim trail represent another example of a design gap. It is not aesthetically pleasing and also it is financially unjustified. This also disrupts the simplicity of the park.

When analysing the financial aspect, Park Macedonia 1 is full of expensive varieties, forms or cultivars of different tree species. There are enough trees of specific kind to design three park areas of the same size. It would be better to emphasize the usage of native plants because they are typically more resistant to disease and other environmental risks than non-native species and, of course, they are generally more cost-effective, making them a practical choice for landscape design (Helfand et al. 2006).

Striving for simplicity in landscapes is generally beneficial, but simplicity should not be mistaken for lack of complexity. Designing landscapes that evoke happiness and comfort involves balancing colours, shapes, curves, and textures, but this approach has to ensure more imaginative landscapes, rather than those which are simplistic or boring (Sandborn 2015).

Simplicity in Park Macedonia 1 is disrupted by planting certain plants in inappropriate places, such as new plants between the roots of a large tree *Salix alba* 'Tristis', mentioned before (Figure 7). This is bad for all trees, but for the visitors too. When we look into so chaotic, cluttered or fussy landscape, it does not benefit our mental health (Rand 2017).

It is also impermissible to have an incorrect distance between plants. This is the result of improper planning and planting. Landscape designers should give trees their space (Figure 8) and should not mix similar or the same forms too close one to another (Figure 8a). In that way plants do not have ideal conditions for proper growth, but also the aesthetic value of each plant decreases and the aesthetic effect of the whole landscape is reduced.

The first example of a design error (Figure 8a) shows that although the form of both individual trees is specific (*Salix alba* 'Tristis' ambig. and *Betula pendula* 'Youngii'), they are not expressed and their decorativeness is lost. The same negative effect is visible in the second example (Figure 8b), where two trees with different dominant aesthetic elements (*Salix alba* 'Tristis' ambig., tree with a specific form, and *Prunus cerasifera* 'Nigra' tree with dominant colour), are planted too close one to another.

Figure 8. (a) Incorrect distance between plants with similar form (*Salix alba* 'Tristis' ambig. and *Betula pendula* 'Youngii'), Park Macedonia 1; **(b)** Incorrect distance between plants with different dominant aesthetic elements (*Salix alba* 'Tristis' ambig. – specific form, and *Prunus cerasifera* 'Nigra' – dominant colour), Park Macedonia 1, 2023.

CONCLUSIONS

Given that urban greenery significantly impacts the quality of life in the contemporary society (Sadeghian and Vardanyan 2013, Konijnendijk et al. 2013, Szczepańska et al. 2016, Virtudes 2016, Knez et al. 2018, Arellano and Roca 2022, Stipanović et al. 2022), the need for its planning and designing is increasingly evident, and garnering has gained widespread recognition (Grahn and Stigsdotter 2003, Matsuoka and Kaplan 2008, Ignatieva et al. 2011, Xiu et al. 2016, Anguluri and Narayanan 2017).

This paper analyses Park Macedonia 1 in Skopje, focusing on functionality, safety, plant species selection, layout of the plants and landscape design principles. While the park serves diverse visitor interests, representing a multipurpose and multifunctional green area, it has notable design gaps, including issues with entrances, plant layout and focal points, which impact visitor safety, usability and their feelings. Specific safety concerns include child safety and access from the south entrance. The park's over-reliance on several dominant tree species has led to many diseased trees, violating the '10% rule' or '10% solution' (Santamour 1990) for species diversity. Out of 29 plant species, only three are evergreen, resulting in poor visual appeal and their ecological functions during late autumn and winter. Inappropriate planting locations and the absence of a green belt as a buffer zone contribute to these issues. Design principles, such as rhythm and line, are not effectively applied, resulting in a monotonous experience for visitors. On the other hand, excessive focal points disrupt the park's simplicity, while dense and poor grouping of trees diminish individual plant appeal. These gaps in the design create confusion and anxiety among visitors, undermining their overall enjoyment of the space.

Urban planning and landscape design of parks are part of necessary activities for better and healthier urban life. Creating parks is not just about planting trees but about designing 'great places' that enhance the quality of life and support mental and physical health (Stigsdotter 2005, Lyles-Chockley 2008, Douglas et al. 2017). Planting is good, but planting with a plan is better (Sousa-Silva et al. 2023). Thoughtful planting, considering the types of trees, their purposes, and their locations is crucial. Effective landscape design can maximize the benefits of urban greenery, transforming parks into 'great places'. The insights gained from this analysis offer valuable guidance for future urban designs in Skopje and other cities, ensuring that parks are not merely green spaces but essential components of a vibrant urban ecosystem.

Author Contributions

VBS, JČ and SO conceived and designed the research. VBS and IM carried out the field data collection and performed qualitative interpretation of data. JČ and VA contributed to the quantitative interpretation of data. VA and SO revised and contributed to the discussion of results. VBS wrote the manuscript and contributed to the figures. SO supervised the research and provided valuable feedback to the manuscript. VBS dealt with the revision process.

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Conflicts of Interest

The authors declare no conflict of interest.

Supplementary Materials

Supplementary File 1 - (a) Pet park, Park Macedonia 1; (b) Parts for intimate rest, Park Macedonia 1, 2023.

Supplementary File 2 - (a) Children's park elements, Park Macedonia 1; (b) Cycling track for children, Park Macedonia 1, 2023.

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