

A VÁROSSZÖVET SZUKCESSZIÓ ÁLTAL FORMÁLT ZÖLDFELÜLETEI

Városi vadon fogalmának meghatározása esettanulmányok elemzése alapján

THE GREEN SPACES OF THE URBAN FABRIC SHAPED BY SUCCESSION

Defining urban wilderness based on case study analysis

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ABSZTRAKT

A tájépítészeti diszciplínában napjainkban radikális szemléletváltás szemtanúi lehetünk. A városi közterületi fejlesztéseknél a természetalapú megoldások megjelenésével a zöldfelületek extenzív fenntartása is reflektorfénybe került. A kutatás fókuszában ezek közül a tudatosan létrehozott, szukcesszió által uralt zöldfelületek – más néven városi vadon területek – létesítési módjai, bővítési lehetőségei állnak. Ezen területek egészének és elemeinek tervezése, kezelése egyelőre rengeteg kérdést felvető, összetett feladat. Cikkünkben definiáljuk a városi vadon fogalmát. A városi vadon jellemzésén, értelmezésén túl kitérünk a városlakók mentális jól-létére gyakorolt hatására, azaz a passzív rekreációs aspektusokra. A feltárt elméleti alapok egy egyetemi műhelymunka során kerültek gyakorlati alkalmazásra. A műhely mint egy kísérleti laboratórium, arra kereste a választ, hogy az elméleti

kutatási eredményeket hogyan lehet integrálni a hazai, klasszikus tervezési gyakorlatba. Ennek eredményeképp egy valós helyszínre négy hallgatói koncepcióterv készült.

Kulcsszavak: városi vadon, zöldhálózat, szukcesszió, mentális jól-lét, környezetpszichológia, fenntarthatóság ☉

ABSTRACT

The discipline of landscape architecture is witnessing a radical shift in approach. With the emergence of nature-based solutions in urban public space development, the extensive maintenance of green spaces has also come under the spotlight. The focus of this research is on ways of establishing and expanding consciously-created green spaces dominated by succession, also known as urban wilderness areas. The planning and management of these areas as a whole and of their components is still a complex task that raises many questions. In this article, we define the concept of *urban wilderness*. In addition to the characterisation and interpretation of urban wilderness, we will also discuss its impact on the mental well-being of urban dwellers, i.e. its passive recreational aspects. The theoretical foundations explored were put into practice in a university workshop. As an experimental laboratory, the workshop sought to answer the question of how theoretical research findings can be integrated into domestic, classical planning practice. As a result, four student concept designs were developed for a real site.

Keywords: urban wilderness, green network, succession, mental well-being, environmental psychology, sustainability

INTRODUCTION

The destruction of natural flora and loss of semi-natural habitats is a consequence of agriculture, urbanisation, industrialisation and globalisation [1] (p. 2). Urban sprawl is fragmenting natural habitats, reducing their connectivity, isolating populations and reducing their species composition. Habitat loss, degradation and fragmentation caused by urban development leads to local extinction of plants and animals. The impact of urbanisation on habitat degradation and fragmentation has been observed around the world [2-6]. Urban sprawl is a major driver of habitat loss and species extinction worldwide. Urban wilderness can serve as a tool to help conserve and enhance urban biodiversity.

METHODOLOGY

The research methodology is based on three pillars. First, it presents the environmental psychology and ecology of urban wilderness based on interdisciplinary research. Then, it summarises the design aspects of these specific

green spaces through case studies and illustrates their outdoor qualities through realised examples. Finally, it summarises the positive effects of urban green spaces shaped by succession on visitors and users by presenting relevant research.

A workshop was held to put into practice the principles formulated in the summary of the research findings. Landscape architecture students created four concepts, which were developed by applying the experience of the case studies and research results to a real site. As a further task, they had to analyse green spaces that could be integrated into the urban wilderness, either through the recommended examples or their own chosen examples, and then integrate the lessons learned into their designs.

CHARACTERISATION OF URBAN WILDERNESS

According to the Interpretative Dictionary of the Hungarian Language, the meaning of the adjective *urban* is: located in the city, formed there, characteristic of the city [7]. That is, the given element or thing is not necessarily considered urban solely in relation to its position or characteristics, but its formation can also be linked to the city. This is no different for the term *urban wilderness*. It is an element of green space that cannot be separated from the urban fabric, an integral part of it.

Wilderness as a concept, according to the Interpretive Dictionary of the Hungarian Language, is: a densely abandoned forest area, free of cultivated areas, without human handprints, far from settlements and infrastructural facilities, freely growing without care [7]. However, in our case, the advantage and benefit of this green space quality is that it is an integral part of the urban fabric, i.e. it is *urban*.

The definition and interpretation of wilderness varies from discipline to discipline. This is typical both in our country and internationally [8-10]. In the domestic context, the closest to the term among the spatial categories defined by nature conservation are nature reserves of national or local importance that are embedded in the urban fabric. However, their primary purpose is not recreation. The latter is rather the case for the park forests on the outskirts of the capital. However, by virtue of their position, they cannot be considered urban.

The word *wilderness* conjures up images of a remote, untouched, untamed area. The symbiosis of prehistoric

Country	Document	Location	Attributes of the area	Naturality	Flora and fauna	Human activity	Management
Australia	Wilderness Act 1987 No 196	–	The size of the area should be sufficient to maintain its natural state.	It must be maintained in its natural state.	It highlights flora and fauna as important features.	Human interventions have not significantly changed it.	It can be restored to its natural state.
Canada	Canada National Parks Act (S.C. 2000, c. 32)	–	–	It exists in its natural state or able to return to it.	–	–	–
Canada	Provincial Parks and Conservation Reserves Act, 2006, S.O. 2006, c. 12	–	Large area.	Shaped by the forces of nature.	–	Visitors travel without vehicles.	–
Canada	Labrador – Wilderness and ecological reserves act 1990.	–	Large areal extent for species conservation.	It is characterised by the seamless interaction between living organisms and their environment.	–	Little or no human activity affects it.	–
Iceland	Nature Conservation Act, No. 47 of 1971.	Situated at least 5 km from human activity (power lines, power stations, reservoirs and main roads).	At least 25 km ² of land.	Where nature can thrive without anthropogenic influences.	–	Not affected by human activities.	–
Japan	Nature Conservation Law, 1972 (Law No. 85 of 1972).	–	–	It preserves the natural environment in its original state.	–	Not affected by human activities.	Managed.
South Africa	The National Environmental Management: Protected Areas Act 57 of 2003	–	–	It preserves its inherent natural appearance and character.	–	Not affected by human activities.	Unmanaged.
USA	The Wilderness Act. Public Law 88-577 (16 U.S.C. 1131-1136) 88th Congress, Second Session, September 3, 1964	Where humans are visitors and do not have any form of control over the land.	At least five thousand hectares.	It preserves its original character.	–	The imprint of man's work is essentially imperceptible.	Protected and managed to preserve its natural state.

and medieval forest use and forest life also refutes the view that untamed wilderness and man are classically distant. British research has shown that the use of medieval parks, wildlife parks and woodlands benefited local flora and fauna, and that their remnant structure – *parkland* – still has high habitat value today [11] (p. 32). This has been confirmed by other international research, which has shown that rural parks that were previously under regular use have higher biodiversity than the surrounding forests in their vicinity [12] (pp. 165-173).

EFFECTS ON MENTAL WELL-BEING

What are the benefits of an urban wilderness for the people who live there? What does it offer users and visitors? What feelings and experiences should be created to boost visitors' mental well-being? Some studies on the recreational opportunities offered by urban wilderness are presented below.

Research has shown that the wilderness experience can also be enjoyed in small patches of forest close to work or home, in small areas of intense urban

◀◀ **Table 1:** Overview: definition and comparison of wilderness characteristics under international legislation

SOURCE: AUTHORS

Fig. 1: Greenwich Ecology Park, London, UK

SOURCE: GOOGLE EARTH

Fig. 2: Naturpark Südgelände, Berlin, Germany

SOURCE: [HTTPS://WWW.NATUR-PARK-SUEDGELAENDE.DE/FILEADMIN/_PROCESSED_/4/6/CSM_SUEDGELAENDE_SERVICEINFOS_BESUCH_PLANEN_C_KONSTANTINBOERNER_9A45B1F8F7.JPG](https://www.natur-park-suedgelaende.de/fileadmin/_processed_/4/6/csm_suedgelaende_serviceinfos_besuch_planen_c_konstantinboerner_9a45b1f8f7.jpg)

Fig. 3: La Petite Ceinture, Paris, France

SOURCE: [HTTP://IGNITION.EG2.FR/WP-CONTENT/UPLOADS/2016/01/SEPT_15_4_LIGHT.JPG](http://ignition.eg2.fr/wp-content/uploads/2016/01/sept_15_4_light.jpg)



environments, regardless of their size [13]. Wilderness evokes both awe and terror: the fascination and wonder of nature combined with lurking dangers. Visitors to the wilderness are enriched by what are called profound experiences of nature: they come into contact with wildlife and experience the thrill and danger of getting lost in the forest [14] (pp. 137-145).

According to the "space-place" theory, "place" is familiar and safe, while "space" is free, unknown, explorable, but can also harbour dangers and excitement. Spaces that are sufficiently known are reclassified as places [15] (pp. 3-7). The wilderness that emerges in the urban fabric can be a space that is unknown, exciting, inspires exploration, an opportunity to break away from the known, the safe, and thus from urban society. Wilderness areas - *here the source basically means forest-like patches* - trigger different psychological and healing mechanisms compared

to other green spaces. Self-confidence is increased, and visitors benefit from a deepened state of consciousness and a realisation of really important, personal issues. Furthermore, these areas may have higher stress-relieving effects than other green spaces [16] (pp. 264-275). Smaller patches of urban wilderness and woodland can provide experiences of the same quality as extensive woodlands visited recreationally [13].

In Australia, 131 people living and working in or near forested areas shared their experiences of wilderness, so-called transcendental experiences, in a research study. They said that spending time in the wilderness nearby helped them to overcome the obstacles of everyday life. According to their responses, they found it easier to live and appreciate the moment, to feel a sense of oneness with something more sublime, to experience timelessness [17] (pp. 249-260). In a further study in the UK, the

Fig. 4: Tavasz Park, Monor, Hungary

SOURCE: [HTTPS://WWW.OBJEKT.HU/MONOR](https://www.objekt.hu/monor)

Fig. 5: Val Fourré, Mantes-la-Jolie, France

SOURCE: [HTTPS://LANDEZINE.COM/A-CHANGING-NEIGHBOURHOOD-BY-ESPACE-LIBRE/](https://landezine.com/a-changing-neighbourhood-by-espace-libre/)

►► **Fig. 6:** SEB, Copenhagen, Denmark

SOURCE: ORSOLYA FEKETE AND ERIKA VÖRÖS



following was found in relation to experiences in wild, semi-natural areas: typically, an increased sense of adventure, risk-taking and challenge-seeking, and a freer, more informal way of experiencing social interactions. There is also a sense of freedom, excitement and danger. Young people aged 16-21 often go to the woods when they are emotionally upset or simply want to organise and collect their thoughts [18] (pp. 49-64).

As can be seen from the above, the experience of nature is a key recreational force when it comes to the mental health and well-being of urban residents. Abandoned areas, dominated by succession, developed or undeveloped with minimal planning intervention, are particularly suited to this.

INTERNATIONAL OUTLOOK

The concept of wilderness can be found in the legal systems of many countries. The table below summarises the definitions used in the documents reviewed up to the writing of this article:

A common feature and expectation is that traces of human activity and presence should be minimal or non-existent in wilderness areas, and should not cause

significant and substantial change. There is also the question of the appearance of undeveloped, roadless areas and the prohibition of motorised transport. In many cases, the nature of the use is essentially focused on providing retreat and contact with nature. Wilderness areas also provide opportunities to observe the undisturbed interaction of living organisms with their environment. They also offer visitors the opportunity to engage in recreational activities with low environmental impact and to integrate with nature. In terms of **naturalness**, there is a general sense of nature without control. As the most important shaping factors, natural forces shape the areas defined as wilderness, where the undisturbed interaction of living organisms and their environment, as well as the inherently natural characteristics and appearance of the area, can be observed by visitors. In terms of maintenance and **management**, the definitions of the regulations range from abandoned green areas that have developed through succession to protected areas under regular management.

An **urban wilderness** is therefore the remnant green space that has been created, established, abandoned or fragmented by urban development in the urban



fabric. In terms of naturalness, it inherently retains its natural characteristics and/or appearance. It is an area shaped by natural forces, where there is a smooth interaction between wildlife and the environment. Visitors can engage in low-impact recreational activities and interact with nature. An unmanaged or extensive green space element, with intensive management limited to a minimum number of sites, mainly influenced by vegetation succession.

CASE STUDIES

The question is how an urban wilderness can integrate, function and survive in an intensive urban fabric. Due to space constraints, this article does not provide a detailed analysis of the sample projects presented below. Their qualitative and quantitative characteristics will be summarised in a later phase of the research.

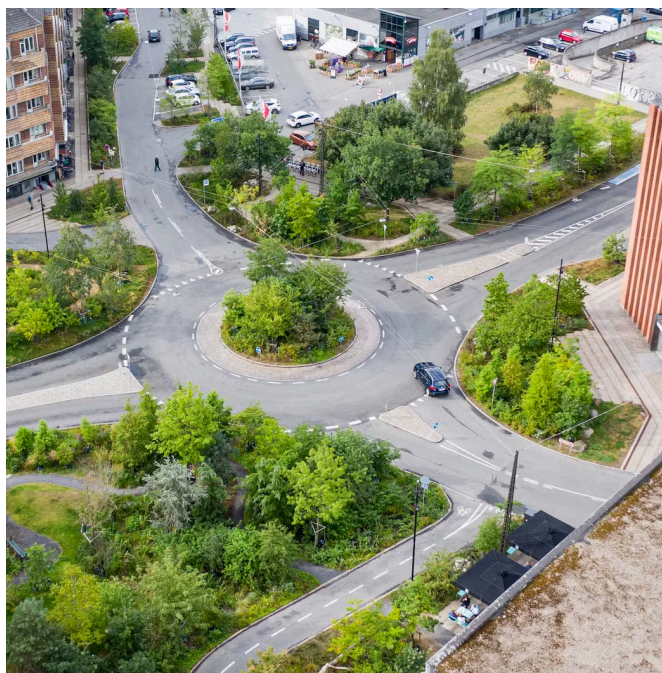
International case studies were examined to analyse the suitability of wilderness in urban settings. The selected projects, briefly presented as examples, are linked to the enforcement of succession and extensive conservation. A number of solutions can be seen in international practice: the Greenwich Peninsula Ecology Park on the

River Thames in London, an ecological park on the Greenwich Peninsula, an area enclosed by the intensive urban fabric of London, with densely built-up residential and service areas in its vicinity. Extensively maintained on a point, feature and strictly necessary site basis, the park is located in the heart of the city and managed by volunteers.

Urban wilderness can be developed with infrastructure by redefining intensively developed brownfield sites. A well-known example of this is the Naturpark Südgelände in Berlin. The former railway brownfield area is now dominated by succession. Its western areas were abandoned in 1952, while the eastern areas continued to be used and were gradually returned to nature.

Petite Ceinture park is an exciting brownfield project similar to the Berlin example. Parts of the circular railway, which has been closed for decades and encircles central Paris, have been opened up to the public with minimal design intervention.

The Tavas Park in Monor, designed by the landscape architect Objekt, is a national example of conscious intervention and careful planning. The public park, created with a sensitive exploration of the three levels of vegetation, is an exciting mix of enclosed patches of softwood



grove with intensively mown and maintained areas. The park is wedged into a dense residential urban fabric, bordered by busy roads.

A further tangible example in France of integration into the residential area is Val Fourré, in Mantes-la-Jolie, where the contrast between the extensively created pocket parks and the dense housing development is truly visible.

This is followed by two more projects, also based on natural succession in terms of green space maintenance, from the Danish landscape architecture firm SLA: *City Dune* and *Sankt Kjelds Plads*. *City Dune* is a park at SEB Bank's headquarters in Copenhagen, which is open to the public and free to visit. Its composition works with loose, organic plan forms framing three-tiered plant patches that have been left to succession.

Sankt Kjelds Plads is also a transport hub in Copenhagen. Here, the enrichment of biodiversity, extensive

management, the focus on sustainability and the unleashing of natural processes are even more evident. The new green space in Copenhagen's so-called Climate Area is primarily intended to treat stormwater run-off from flash floods, thereby relieving the city's sewerage system. It will also contribute to climate adaptation efforts by mitigating the thermal insulation effect in the city centre.

The urban wilderness is often an extensive green space element, which is closely embedded in the urban fabric. Its development is also linked to the city, so naturalness as a criterion cannot be expected. In this context, freedom from human disturbance and activity is not a criterion, and the most important criterion is the influence of natural processes. Its defining attribute is the predominance of the succession line.

As can be seen from the examples above, the emergence of urban wilderness is not limited to classic public

◀◀ **Fig. 7:** Sankt Kjelds Plads,
Copenhagen, Denmark

SOURCE: [HTTPS://WWW.SLA.DK/CASES/SANKT-KJELDS-SQUARE-AND-BRYGGERVANGEN/](https://www.sla.dk/cases/sankt-kjelds-square-and-bryggervangen/)

◀◀ **Fig. 8:** Planning area

SOURCE: GOOGLE EARTH

◀◀ **Fig. 9:** Photo taken on site

SOURCE: LÁSZLÓ PAP MIKLÓS

Fig. 10: Concept I – "Danube Park Forest" – Maja Erdei, Liliána Máté



spaces, which are registered and interpreted as public gardens or parks – they can be existing mosaic areas of natural remnants, or abandoned industrial, transport or institutional areas, or even wilderness areas created deliberately in the city.

An important characteristic of urban wilderness is its abandonment and lack of control. There is a demand for some kind of management and care on the part of society: this may simply be a sign of maintenance [20] (pp. 161-170.) People prefer their green spaces to be well-ordered, organised and managed in the immediate vicinity of their homes, but they also demand forests and “wilder” green spaces within easy reach [21] (pp. 273-287.) Furthermore, there should be an emphasis on contrasting the appearance of organic development with planned development [19] (pp. 33-48.).

INVESTIGATING THE USE OF URBAN WILDERNESS IN A SAMPLE AREA IN BUDAPEST

In parallel to the analysis of the literature on the subject, based on the lessons learned from the examples presented and analysed, an attempt was made to design an urban wilderness-like public park at conceptual level, with the involvement of landscape architecture students, in the framework of a workshop at the Department of Garden and Open Space Design of MATE TTDI.

The cooperation between the Municipality of Újbuda and MATE TTDI aims to create an extensive public park with urban wilderness areas. The concepts outlining a vision of extensively managed green spaces can contribute to the creation of a new approach to public parks in the future. The collaboration started in the spring semester of the 2022/2023 school year and will continue in the



autumn semester of the 2023/2024 school year, taking into account the municipality's documentation for comments and opinions.

In the course of our work, we have tried to apply the elements of the literature and the groundwork research that we found useful in a live, real-life project. The examples were taken from the sites briefly described above, i.e. Naturpark Südgelände, Le Petite Ceinture, the Val-Fourré housing estate, the Little Lake Park in Monor, and the Greenwich Ecology Park, as well as the Copenhagen examples.

The planning area is located in the 11th district of Budapest, in Újbuda, on the banks of the Danube. It covers an area of 14.5 hectares. It is bordered by Szerémi út, Hunyadi János út, Dr. Papp Elemér utca and Árasztó út. Its vegetation is established, softwood forest. It is the site of Roman ruins, excavated in the early 2000s and subsequently reburied. The neighbourhood contains logistical and industrial areas as well as the Savoya Park shopping centre. The wider area is residential.

The concepts prepared took different approaches to the programming, functions, management and maintenance of the planning area. The plans also show a varied

compositional picture, highlighting the complexity of the issue. Each of the four works has a unique character, with a different approach to the central question of the workshop: how to transform a stagnant, softwood forest into an extensive public park with moderate exploration.

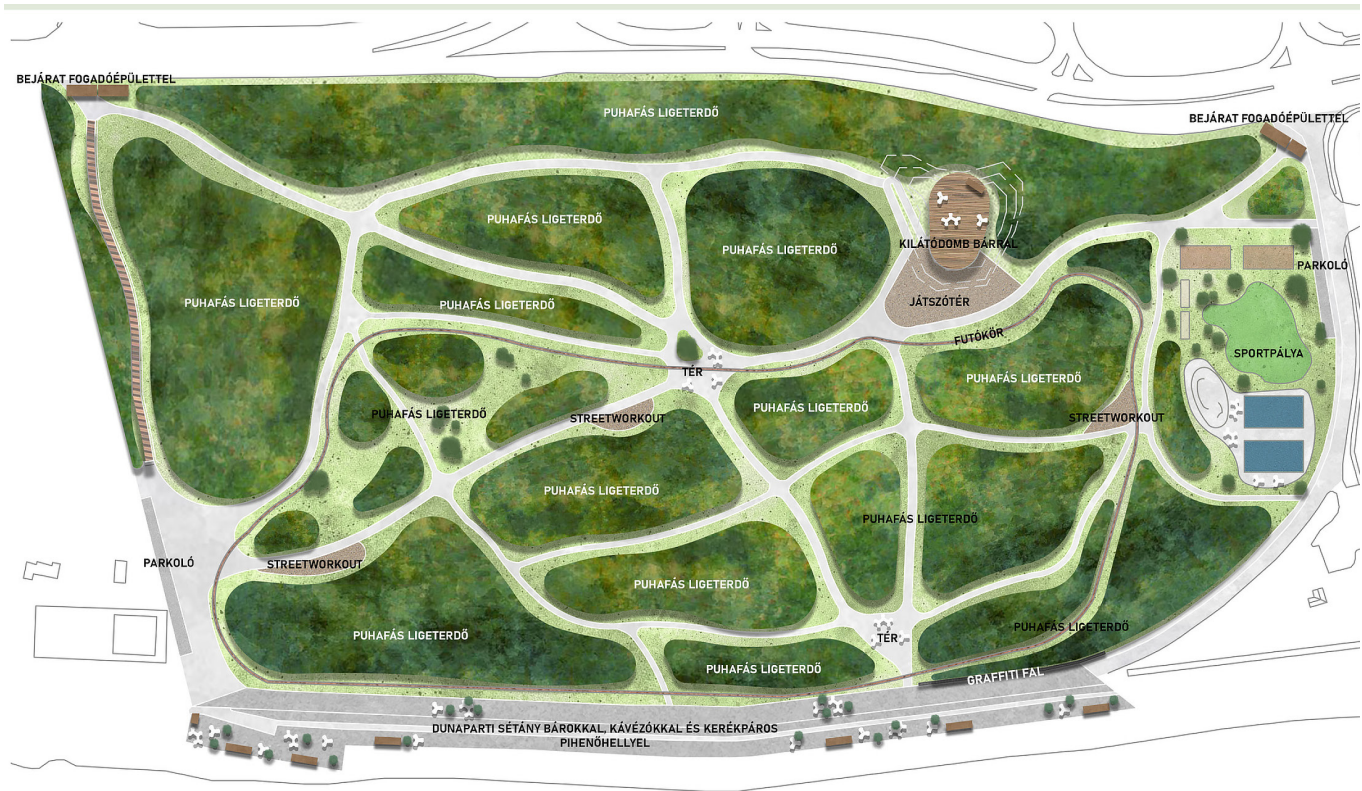
The four concept plans, based on different approaches, were developed through presentations and guided consultation on the forms of urban wilderness. They are briefly described below:

CONCEPT I - "DANUBE PARK FOREST" - MAJA ERDEI, LILIÁNA MÁTÉ

The first concept reveals the core of the planning area. It preserves large, uniform areas of softwood grove forest. It creates a continuous, open, grove stand. The biodiversity of the site will be further enhanced with the creation of an intermittent water surface. This will be enhanced because the area affected by water is subject to no or minimal disturbance, resulting in rich vegetation. Unfortunately, however, the nearby river bank has minimal green space due to the developed shoreline.

The road network of the sketch is adapted to the established, through-going trails and tracks. It blends into

◀◀ **Fig. 11:** Concept II – "Savoya Sporterdő" – Márk Fülöp, Andrea Wallner
Fig. 12: Concept III – "Danube Jungle" – Dávid Nagy, Dorottya Sinkovics



the natural environment with a series of boardwalks. The site is not over-planned, and has minimalist landscape architecture.

CONCEPT II - "SAVOYA SPORTERDŐ"
 - MÁRK FÜLÖP, ANDREA WALLNER

The second concept plan places the planned sports functions sporadically. The spatial structure created is fragmented, with a complex network of paths with several hierarchical levels. The extent of clearings and openings is minimal, with less disturbance to the existing vegetation structure. From a conservation point of view, there is a transition between extensively and intensively managed areas. It develops the whole of the planning area, but does not create a direct link with the Danube bank.

CONCEPT III - "DANUBE JUNGLE"
 - DÁVID NAGY, DOROTTYA SINKOVICS

The third workshop assigns the planned functions and thus a more intensive exploration of the area to the periphery, thereby preserving as much of the internal, contiguous patches of grove forest as possible. It creates

wide, intensively mown, accompanying grassland areas along the roads. The network of paths is somewhat mechanically allocated, with less regard for hierarchy.

CONCEPT IV - "THE WILDERNESS OF ÚJBUDA" - ZITA KUBINYI, BÁLINT MEZEI

The fourth work reworks the naturally formed spatial structure in a point-by-point manner, cutting clearings and gaps. The contiguous forest fabric is torn up, resulting in extensive surfaces. The organic network of paths tries to give the impression of naturalness, while at the same time creating a strong contrast with the natural vegetation by means of "bubble-like circular spaces".

Overall, despite the different conceptual approaches, they differ from a traditional public park concept in one respect: they foresee a significant amount of abandoned or extensively managed land in the future, which, in addition to biodiversity conservation, could also result in significant financial savings for the district in the long run.

Dr. Balázs Almási, László Pap Miklós and Barnabás Tóth consulted on the students' work.

Fig. 13: Concept IV – "The Wilderness of Újbuda" –
Zita Kubinyi, Bálint Mezei



SUMMARY

There are many ways to create and maintain urban wildernesses in international practice, whether in the form of extensively managed public parks, the reclamation of old brownfield sites by nature or ecological parks integrated into intensive urban environments. Nevertheless, it is important to create green spaces of this quality, as they contribute to the mental well-being of the population and provide an opportunity for people living in dense urban areas to connect with nature.

These areas have many – as yet untapped – environmental and psychological benefits for city dwellers. Spending time in an urban wilderness can provide experiences that contribute to self-confidence, a deepened state of mind and help people cope with the challenges of everyday life. Furthermore, this has a much more intense effect on the recipient than in traditional green spaces.

Another outcome was the student workshop, which produced four concept designs based on the literature research to integrate the lessons learned. The practical application of the research findings on urban wilderness design during the workshop will both shape the next generation of landscape architects' perspectives, nuancing them against the traditional, domestic approach, and shed light on new research directions. ©



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