

SPORT DEVELOPMENT VIA SUSTAINABLE URBAN LAND USE - THE CASE OF GYŐR, HUNGARY

RICHARD SZALOKI, PETRA SZAKONYI

Szechenyi Istvan University, Gyor, Hungary
szaloki.richard@sze.hu, szakonyi.petra@sze.hu

This study presents an overview of the key sports developments in Győr over the past decade, emphasizing the significance of sustainable urban land use, particularly in the context of brownfield rehabilitation and comprehensive city development. Sustainable land use plays a crucial role in influencing economic, social, and environmental dynamics and aligns with the European Union's goal of achieving no net land take by 2050. In Hungary, this objective is also part of the national development strategy. Recent legislative changes, including the Architecture Act XXIII of 2023 and impending regulations for Spatial Planning and Building Requirements, underscore the focus on brownfield rehabilitation and the protection of green spaces. The paper discusses notable sports developments in Győr as well as those in other European cities, such as London and Paris. It explores the challenges faced by various investment types and identifies future opportunities for sustainable urban land use. Additionally, the study aims to highlight the social, economic, and environmental aspects of these sports investments.

DOI
[https://doi.org/
10.18690/um.epf.5.2025.3](https://doi.org/10.18690/um.epf.5.2025.3)

ISBN
978-961-286-984-7

Keywords:
sport development,
urban land-use,
sustainability,
environmental,
social and economy
aspects

JEL:
D,
H,
I



University of Maribor Press

1 Introduction

Brownfield rehabilitation planning is increasingly recognized as a vital component of sustainable development in the European Union and Hungary. This approach integrates economic, social, and environmental dimensions, enhancing land use as both a catalyst and reflection of urban development. The revitalization of underutilized and contaminated sites is crucial not only for local progress but also for broader environmental sustainability, directly aligning with EU policy. Redeveloping these sites allows municipalities to transform neglected areas into economically, socially, and environmentally viable spaces. Projects may include residential neighborhoods, commercial centers, innovation parks, sport and recreational spaces, addressing urban developmental deficits. In Győr, several successful brownfield revitalization initiatives have transformed former industrial zones into vibrant areas that meet residential and commercial needs.

2 Theoretical Background / Literature Review

The term “brownfield” originated in North America and refers to land that has been abandoned or under-utilized, often due to contamination from previous industrial activities. Redeveloping these sites transforms neglected industrial, commercial, or military properties into economically, socially, and environmentally sustainable spaces through targeted revitalization efforts (Jacek et al., 2022).

The concept of brownfield is central to various European programs, emphasizing its role in combating urban sprawl and improving land use efficiency. The EU's 7th Environmental Action Program aims for no net land take by 2050, underscoring the importance of prioritizing brownfield rehabilitation.

Historically, the Olympic Games have predominantly been hosted by wealthy, industrialized nations. However, the International Olympic Committee (IOC) has recently encouraged bids from emerging economies, evidenced by the awarding of the 2008 Summer Games to China and the 2016 Games to Brazil. Such trends have raised important considerations about how host nations utilize mega-events to promote infrastructure development and overall economic growth. Focusing on previous investments in brownfield development related to the Olympic Games in cities like London and Paris offers insight into effective strategies employed by host

nations. For instance, the 2012 London Olympics involved significant redevelopment of the East London area, transforming the abandoned industrial site of the Olympic Park, which now serves as a vibrant community and sporting hub. Similarly, Paris plans to use the 2024 Olympic Games as a catalyst for substantial urban redevelopment, enhancing public transport infrastructure and repurposing former industrial sites into recreational and residential areas (Baumann et. al. 2013).

Since 1997, Hungary has established a legislative framework for brownfields, with the Act LXXVIII of 1997 providing essential definitions and emphasizing the need for focused rehabilitation. Recent updates have heightened attention on brownfield planning, aligning city development plans in Győr with sustainable urban growth objectives. Over the past 30 years, numerous abandoned sites have been repurposed, with approximately 11 former industrial and military sites now successfully utilized as sport or recreational areas, reflecting Győr's commitment to sustainable urban development.

3 Methodology

This study employs a two-step analytical process to assess the brownfield redevelopment ecosystem in Győr, Hungary, with a focus on sustainable urban development and sport-related investments.

In the first phase, a comprehensive review of European and Hungarian national policy frameworks is conducted to identify past, present, and future legislative measures related to brownfield rehabilitation. This context establishes how policies influence local development initiatives, particularly in enhancing sports facilities and community recreational opportunities.

The second phase analyzes the specific challenges and opportunities of brownfield redevelopment in Győr, emphasizing the transformation of former industrial sites into vibrant sports and recreational areas. This phase also evaluates the impacts of new legal frameworks on sustainable urban development, particularly in facilitating investments in sports infrastructure.

Through this methodology, the study aims to highlight how brownfield redevelopment can drive sustainable urban goals while promoting community-oriented sporting events.

3.1 EU legislative framework

The analysis of EU documents regarding brownfield rehabilitation reveals several important consequences that can shape future policies and strategies. While 18 documents reference brownfields, only four—such as the Circular Economy Action Plan (European Commission, 2020a) and the EU Biodiversity Strategy for 2030 (European Commission, 2020d)—explicitly address rehabilitation. This highlights a significant gap, indicating the need for more targeted policies. The limited focus on brownfields also suggests a lack of coordinated strategies across member states. Developing comprehensive frameworks can encourage the consistent application of best practices in urban redevelopment. Furthermore, the necessity for targeted brownfield policies may stimulate discussions on increasing funding through initiatives like the Just Transition Fund (European Parliament, European Council, 2021a), thereby supporting local efforts in site revitalization. Moreover, the analysis emphasizes the importance of integrating brownfield redevelopment into broader urban planning strategies, promoting both economic growth and sustainable land use. By fostering collaboration among stakeholders and highlighting successes documented in frameworks such as the European Green Deal (European Commission, 2019b) and the EU Soil Strategy for 2030 (European Commission, 2021a), the EU can enhance knowledge sharing and capacity building in brownfield management. Overall, addressing these issues positions the EU to strengthen its approach to brownfield rehabilitation, aligning with sustainable development goals while enhancing urban resilience (Szakonyi & Frank, 2024).

3.2 Hungarian legislative framework

Since 1997, Hungary's national legal framework has provided a clear definition of brownfield sites. The Building Act LXXVIII of 1997 defines brownfield land as parcels that have been abandoned, underutilized, or degraded—typically polluted due to prior industrial, commercial, transportation, or defense uses—but that can be transformed into areas of value-added development through environmental remediation and technical intervention. Came to force from October 1, 2024, the

Hungarian Architecture Act XXIII of 2023 replaced the Building Act LXXVIII of 1997. This new legislation not only reaffirms the definition of brownfield sites but also establishes the principle of prioritizing their redevelopment. It stipulates that if a brownfield site exists within a 5 km radius of the proposed new development within a municipality's administrative area, new development areas may only be designated in cases of significant public interest. Additionally, it delineates the national boundaries for brownfield areas and mandates that information pertaining to properties classified as brownfields, along with related governmental decisions, must not contain personal data. The utilization of brownfield sites must take precedence over greenfield developments, particularly when projects can be feasibly developed on brownfields. To encourage this transition, the legislation advocates for tax exemptions linked to remediation efforts and the establishment of specific urban planning, parceling, and construction requirements. Brownfield areas should be repurposed in ways that align with urban development goals and the overall urban structure, ensuring adequate provision of both technical and green infrastructure. Another significant legislative change occurred with the replacement of Government Decree 253/1997 (XII.20.) on National Urban Planning and Building Regulations by Government Decree 280/2024 (IX.30.) on the Basic Rules of Urban Planning and Building Regulations. This decree clarifies urban planning and building requirements while establishing specific regulations for the use of brownfield areas. Moreover, according to the 21/2016 (IX.23.) Municipal Decree on Győr's Master Plan, brownfield developments are positioned to play a critical role in Győr's urban development concept and strategy, as well as in its overall urban planning processes.

4 Discussion

In Győr, structural changes in the economy began in the years leading up to the political transition, marked by the decline and closure of numerous industrial enterprises, as well as their transformation. This process accelerated following the political transition, resulting in the shutdown of most producer cooperatives and the vacating of barracks formerly utilized by Russian forces. Consequently, this led to the emergence of significant brownfield areas related to the city's scale. Over the approximately 30 years since the transition, many previously abandoned buildings and brownfield sites have gradually been repurposed and redeveloped. To date, around 11 former industrial and military sites (Table 1) have undergone successful

reutilization, reflecting a growing commitment to sustainable urban development within Győr.

Table 1: Brownfield developments of the last decade

Previous function	New function
1. Former Wagon Factory	1. "Városrét" residential area and "Árkád" shopping mall
2. Former oil Factory	2. EYOF'17, Olympic village and after residential area
3. Former construction site	3. Lidl shopping center
4. Brownfield next to Pápai st.	4. Residential area
5. Former Frigyes Barack	5. Leier business center
6. Former hunting lodge	6. Neighborhood sub-center, trade services
7. Gas centre	7. "Örömhír" Primary School
8. Former "Richard's" factory	8. Operational industrial estate
9. Former textile mills	9. Győr Shopping Mall Center
10. Former "Gardénia" curtain factory	10. „Duna” shopping centre
11. Former "Graboplast" plastic factory	11. Aldi shopping center

The revitalization of the former oil factory in Győr was strategically planned in advance of the European Youth Olympic Festival. The site, transformed into the Olympic Village, exemplifies successful brownfield redevelopment, as the facilities created during this event were later converted into residential apartments for the community. Additionally, other sports facilities, including tennis courts and an athletic center, were established on former brownfield sites throughout the city. This sport-related urban development not only provided essential recreational amenities but also represents a sustainable solution, integrating environmental rehabilitation with community needs and enhancing Győr's overall urban landscape. The demolished but not yet redeveloped former industrial sites stand out like structural scars in the city structure. Therefore, an important task for improving the environmental quality of the city is the prompt reutilization of these areas.

5 Results

At the moment another 11 brownfield sites awaiting development (Figure 2). Although the redevelopment of the former Győr Biscuit and Wafer Factory has already commenced, where the Széchenyi University Scientific and Innovation Park is planned to be established in the near future. The former areas of the Wagon and Machine Factory have long awaited their new function. The city previously planned a Cultural Quarter with recreational areas for this substantial abandoned site.

Although many of these neglected areas currently lack a designated new function, urban development concepts are aimed at promoting sustainable growth in the city by establishing urban sub-centers and further developing green, sports, and recreational areas, paving the way for functional transformations in the future.

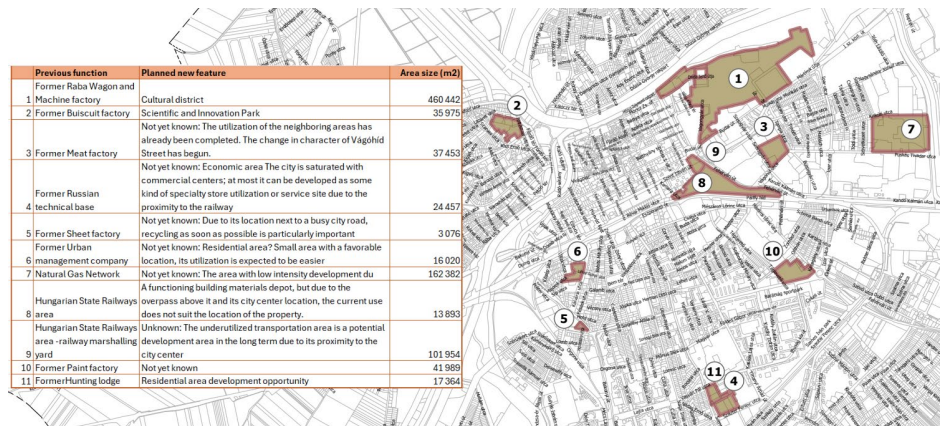


Figure 1: Brownfield development sites near the city center of Győr

6 Conclusions

The case of Győr, Hungary, exemplifies the transformative potential of sustainable urban land use, particularly through the redevelopment of brownfield sites into vibrant sports and recreational areas. This study has outlined the city's strategic approach to revitalizing neglected industrial spaces, aligning with both local needs and broader European sustainability goals. Recent legislative frameworks, such as the Architecture Act XXIII of 2023, emphasize the importance of prioritizing brownfield rehabilitation, thereby paving the way for significant economic, social, and environmental benefits. Through targeted investments and comprehensive urban planning, Győr has successfully repurposed several former industrial sites, as evidenced by the establishment of facilities for the European Youth Olympic Festival and the conversion of these spaces into residential and community areas. This integration of sports development into urban design not only addresses the legacy of industrial decline but also enhances community cohesion, promotes health and well-being, and contributes to environmental sustainability. However, as Győr continues to navigate the challenges of redevelopment, it is essential to maintain momentum in addressing the remaining brownfield sites without designated

functions. Future urban planning should focus on transforming these areas into functional spaces that support both recreational activities and green infrastructures, ensuring a sustainable urban landscape for generations to come. By fostering collaboration among stakeholders and adhering to EU directives, Győr stands as a model for other cities aiming to leverage brownfield rehabilitation as a catalyst for sustainable development in sport and beyond.

References

- Jacek G., Rozan A., Desrousseaux M., Combroux I., (2022). Brownfields over the years: from definition to sustainable reuse, *Environmental Reviews*, Ottawa National Research Council, 30(1), 50-60
- Baumann, Robert and Matheson, Victor, "Infrastructure Investments and Mega-Sports Events: Comparing the Experience of Developing and Industrialized Countries" (2013). EconomicsDepartment Working Papers. Paper 147. http://crossworks.holycross.edu/econ_working_papers/147
- Szakonyi, P.; Frank, A. (2024). Integration of the Secap Method in Sustainable Brownfield Rehabilitation Planning. In: 8th FEB International Scientific Conference: Challenges in the Turbulent Economic Environment and Organizations' Sustainable Development, Maribor, Slovenia: University of Maribor Press (2024), pp. 43-54.
- 7th Environment Action Programme — European Environment Agency. 7th Environment Action Programme — European Environment Agency
- Act LXXVIII of 1997 on the Formation and Protection of the Built Environment National Legal Database: 1997. évi LXXVIII. törvény - Nemzeti Jogszabálytár
- Government Decree 253/1997 (XII.20.) on National Urban Planning and Building Regulations National Legal Database: 253/1997. (XII. 20.) Korm. rendelet - Nemzeti Jogszabálytár
- Government Decree 314/2012 (XI. 8.) on the Urban Development Concept and Urban Planning Tools National Legal Database: 314/2012. (XI. 8.) Korm. rendelet a településfejlesztési koncepcióról, az integrált településfejlesztési stratégiáról és a településrendezési eszközökről, valamint egyes településrendezési sajátos jogintézményekről - Hatályos Jogszabályok Gyűjteménye
- Government Decree 419/2021 (VII. 15.) on the Content of Urban Plans, Their Preparation and Adoption Procedures, and Specific Legal Institutions of Urban Planning National Legal Database: 419/2021. (VII. 15.) Korm. rendelet - Nemzeti Jogszabálytár
- Act C of 2023 on Hungarian Architecture. National Legal Database: Méptv. - 2023. évi C. törvény a magyar építészetéről - Hatályos Jogszabályok Gyűjteménye
- Government Decree 280/2024 (IX. 30.) on the Basic Rules of Urban Planning and Building Regulations. Legal Database: 280/2024. (IX. 30.) Korm. rendelet - Nemzeti Jogszabálytár
- Győr-Moson-Sopron County Development Concept, Strategy, and Program 2021-2027. Győr-Moson-Sopron Megye Stratégiai dokumentumok 2021-2027 – Győr-Moson-Sopron Vármegye Önkormányzata
- Győr City Development Concept 2030. GYMJV-TFK-BIZ_0903
- Győr Integrated City Development Strategy 2021-2027. gyor.hu/easy-docs/5dc982a1d4b70
- Győr Sustainable City Development Strategy 2021-2027. gyms.hu/wp-content/uploads/2023/11/GYOR_FVS.pdf
- Municipal Decree 21/2016. (IX. 23.) on Győr's Master Plan. Rendezési terv és Településképi rendelet - Győr Megyei Jogú Város Honlapja