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THE IMPORTANCE OF GREEN AREAS AND THE CONCEPT OF 'GARDEN CITY' IN ZOLIBORZ IN PROMOTING NEW RESIDENTIAL INVESTMENTS AND THEIR POSITION ON THE REAL ESTATE MARKET

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ABSTRACT: This paper shows the importance and role of urban parks and green areas in Żoliborz, and demonstrates their recreational and leisure role for the district's residents. In this article, the authors present the current position of the Żoliborz district of Warsaw on the local residential real estate market. They show that this position depends on a number of different factors. The historical tradition of the place outlined in the first part of the article – Żoliborz as a green district inhabited mainly by intellectuals – is verified in the second and



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third parts of the article by means of analysing advertising materials of the largest developers operating on the Warsaw market, as well as statements and reports of real estate agencies. The article uses a number of scientific methods: observational, the analysis and logical construction, the analysis of the literature, the analysis of current advertising, marketing and promotional materials of developers in the Warsaw real estate market, in-depth interviews.

KEYWORDS: Żoliborz, green areas, city parks, residential investments

WYMIAR TERYTORIALNY I STRUKTURA PRZESTRZENNA W RAMACH STRATEGII ROZWOJU SPOŁECZNOŚCI LOKALNEJ, REGIONU LUB OBSZARU FUNKCYJNEGO

ABSTRAKT: W artykule ukazano znaczenie i rolę parków miejskich i terenów zielonych na Żoliborzu oraz ukazano ich rolę rekreacyjno-wypoczynkową dla mieszkańców dzielnicy. W artykule przedstawiono aktualną pozycję warszawskiej dzielnicy Żoliborz na lokalnym rynku nieruchomości mieszkaniowych. Pokazano, iż pozycja ta zależy od wielu różnych czynników. Uwarunkowania kulturowe wskazano w pierwszej części artykułu, dalej wskazano uwarunkowania związane z prestiżem dzielnicy jako zielonej dzielnicy zamieszkiwanej głównie przez intelektualistów. W artykule dokonano analizy materiałów reklamowych największych deweloperów działających na rynku warszawskim, a także analizowano raporty agencji nieruchomości. W artykule wykorzystano szereg metod naukowych: obserwacyjną, analizę literatury, analizę aktualnych materiałów reklamowych, marketingowych i promocyjnych deweloperów na warszawskim rynku nieruchomości, a także wywiady pogłębione.

SŁOWA KLUCZOWE: Żoliborz, tereny zielone, parki miejskie, inwestycje mieszkaniowe

1.1. Introduction

This paper discusses the importance and role of urban parks and green areas in Żoliborz as well as demonstrates their recreational and leisure role for the district's residents. The article attempts to answer the following questions: do green areas in this district influence the location of new residential investments, and is this influence significant regarding the prices of residential investments? Also, to what extent are green areas or cultural factors used in the promotion of new residential investments in Żoliborz?

The main framework of the paper's concept is based on a dualistic approach to the research area in question. The article exposes two poles shaping the position of the Żoliborz district on the real estate market. The first one is the tradition of the place (*Genius Loci*) and the qualities of the natural environment. The second

one is the rationality of the decisions made. This is influenced by such factors as the quality and proximity of jobs, transportation accessibility, high level of logistics, services, relative ease of access to the airport. The article shows that success in the real estate market is determined by both of these poles evenly roving. Neglecting the development of one of them, even just temporarily (the pandemic, the war in Ukraine), will result in a shaky leadership position in the real estate market in Warsaw.

The article also describes changes on the Warsaw real estate market as a result of the COVID-19 pandemic and after February 24th, 2022, i.e. the start of the war in Ukraine. The empirical part is divided into three parts. The first part presents the green areas and their origins. Numerous parks, nature reserves, and greenways not only created the structural backbone of the district, but also contributed greatly to its positive image among the residents of the entire city. The second part of the article presents a confrontation of this image with the position of the Żoliborz district on the Warsaw real estate market. The third part is real estate agency reports describing the change in trends as a result of the COVID-19 pandemic and as a result of the outbreak of war in Ukraine. The whole leads to the conclusion of what changes in the real estate market have affected the Żoliborz district in recent years and the reasons for this.

The article uses a number of scientific methods. These include the observational method, the method of analysis and logical construction, the method of analysis and criticism of the literature on the subject, analysis of current advertising, marketing and promotional materials of major developers in the Warsaw real estate market, and in-depth interviews, all of which resulted in two reports on changes in the real estate market in Warsaw, including specifically within the Żoliborz district. The authors of the article analysed the literature about the green districts in Warsaw and in many world cities as well as the data about the declared average prices among selected district in Warsaw. Moreover, the analysis of a new 10-housing investment in Żoliborz was made according to the commercials for new residents and its promotion of the cultural and environmental values – appeal to green areas, reference to cultural property, reference to facilities, proximity of green areas and also slogans from advertising materials promoting individual housing developments, as well as interviews with the Real Estate Office about the changing situation on the Warsaw real estate market after February 24th, 2022.

1.2 Theoretical background and literature discussion

According to P. Trębacz (2019), Żoliborz is an excellent example of the architecture and urban planning of the 1930s (Trębacz 2019). J. Brzezicka, J. Łaszek, K. Olszewski, and J. Waszczuk (2019) claim that Żoliborz is the oldest district of Warsaw, with the existing housing being of satisfactory quality, together

with districts such as Mokotów, Wola, and Ochota (Brzezicka et al. 2019). Research carried out by B. Iwańczak and M. Lewicka (2020) shows differences in the evaluation of districts, with the city's downtown – Żoliborz, Ochota, and Wilanów – rated most positively and inhabited by well-residents (Iwańczak, Lewicka 2020: 7). Coherent design is clearly visible in the Warsaw Housing Community [Pol. *Warszawska Spoldzielnia Mieszkanowa* – WSM], which provides designing in the Żoliborz district (Trębacz 2019). The concept of a 'garden city' is clearly visible in this district and its importance has been confirmed in the extensive research.

A garden city contains both town and rural areas, with a mix of health services and industry, creating diversity and uniformity. A garden city can offer a therapeutic role through nature, influencing mental health (Allmond 2017). According to A. Millward and S. Sabir (2011), using the example of city parks in Toronto, parks that contain trees provide much social, environmental, and economic value to cities. It should also be noted that getting the local population involved in environmental issues is very important. The example of Bangalore, India, shows where the city limited green spaces, parks, and other urban ecosystems to meet its infrastructure and housing needs, although the local citizens appreciated the green spaces more (Enqvist, Tengö, Bodin 2014). Another example of a garden city is Maringá (Brazil), also called a British garden city in the tropics. The city was designed in accordance with the garden city principle and is well connected by rail. At the same time, as a medium-sized city, it boasts good socioeconomic conditions and successful development (Macedo 2011). Another example of garden city is Dakar (Senegal). In this city, the concept served the Dakar colonial administration in creating attractive, prestigious neighbourhoods for the upper class (Bigon 2012).

In the book titled *English Garden Cities: An Introduction* (Miller 2010), cities such as Letchworth, Welwyn Garden Cities, Hampstead, Wythenshawe, Greater Manchester, Harrow Garden Village, and Brentham Garden in Great Britain were mentioned as examples of cities that implemented the concept of a garden city (Miller 2010). Another example of such a city is Ebbsfleet Garden City located in the UK near the Thames river (Pluchinotta et al. 2021). Gardens cities are appreciated by their current and potential citizens.

Research conducted in Australian cities indicated that the level of education of the inhabitants rather than their income influences the level of the greening of the city. Additionally, public education campaigns explain the benefits of greening the city (Kendal, Williams, Williams 2012; Wolf 2003). According to B. Notteboom (2018), the lower classes try to imitate the upper classes, and the importance of gardens and green infrastructure may widen and become available to less affluent social groups, too. However, some garden cities are losing their green spaces. That is the case of Kumasi, where the rapid growth of the city, which has historically been referred to as 'the garden city of West Africa', is unfortunately leading to a reduction in green spaces (Narh et al. 2020).

Research into gardens in Lund, Sweden, showed that urban development influences the development of gardens by limiting the available space or garden vegetation, and the most important elements related to the function of gardens were social ties, recreation, nature, and the experience of relaxation (Hanson et al. 2021).

During the COVID-19 pandemic, urban green infrastructure, such as gardens and city parks, was important in reducing mental stress. However, research in Rio de Janeiro found that home gardens were most effective in relieving mental stress, as they allowed for self-isolation (Marques et al. 2021). Gardens can also contribute to garden tourism. The government in South Korea is stimulating this segment of tourism (Kim, Sung, Hamm, Cho 2022). The example of Dhaka in Bangladesh shows that roof gardens have the potential to be excellent urban ecosystem stimulants (Nur et al. 2022).

In addition, the role of the so-called community gardens is important. Such community gardens also exist in the Żoliborz district. Research conducted in Paris shows that people who engage in community gardens are more often involved in civic initiatives (Torres, Prévot, Nadot 2018). Moreover, during the COVID-19 pandemic, we observed a change in lifestyle and a huge demand for urban green places, as well as open public spaces (Ding, Cenci, Zhang 2022).

There is also a new concept regarding the need to create 'rain gardens' in cities, the role of which will be to protect rainwater, reduce runoff, provide flood protection, prevent groundwater pollution, increase biodiversity, and control the microclimate (Kasprzyk et al. 2022). 'Sky gardens' can also be a solution for districts with space problems (Tian, Jim 2011).

1.3. The phenomenon of Zoliborz as a park district – a unique urban area in terms of composition and spatial theory

Žoliborz is an elite district, a housing estate where people who make the most important decisions in the country reside. The district houses journalists, officers, teachers, and the intelligent elite (Teaching Cooperative Building and Housing – [Pol. Nauczycielska Spółdzielnia Budowlano-Mieszkaniowa]). It was created as a typical garden district of Warsaw city. The legend of Żoliborz is recognisable even abroad, which is why apartments in this district are often bought by foreigners as a portfolio investment. This makes Żoliborz a very interesting case among Polish garden districts.

Modern Żoliborz developed in the 1920s and became known as the most interesting and prestigious district of Warsaw. For years, it was appreciated as a place of living and recreation by Warsaw elites and has also attracted new residents (Baranowicz, Bartelski 1980). Żoliborz has an area of 8.5 square kilometres and a population of 50.800 (*Rocznik Statystyczny Warszawy 2017*). The district is

considered very prestigious, and in the past was inhabited by intellectual elites. Today, the district is accessible to everyone and is mainly associated with single-family and low-rise multifamily housing (Petryna 2018). Żoliborz was designed on an axial basis and was one of the least destroyed districts of Warsaw during World War II. It is generally regarded as an artistic district (Schmidt, Dębowski 2018). It is a district with an average population density index compared to Warsaw (*Przegląd Statystyczny Warszawy* 2019).

The aim of this article is to seek an answer to the following questions: are new residential investments in Żoliborz characterised by higher prices in relation to average apartment prices in the capital city? To what extent are green areas highlighted in the advertising and promotion of new investments? Also, to what extent are other conditions (e.g. culture and transport) promoted?

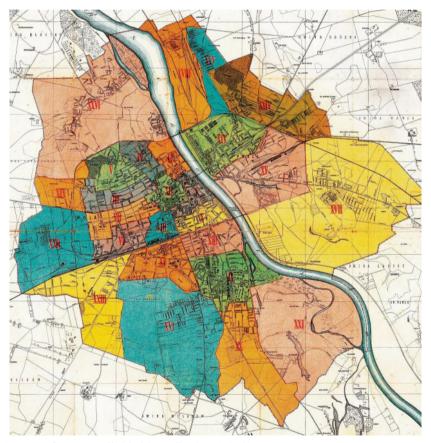


Fig. 1. Map of Warsaw divided into districts (1919)

Source: https://www.gazetapogodzinach.pl/2021/04/08/jurydyki-cyrkuly-komisariaty-jak-rozwijala-sie-warszawa (accessed: 20.11.2023).

In 1908, administratively, Żoliborz did not yet exist as an independent district. However, in 1916, it became a part of Warsaw.

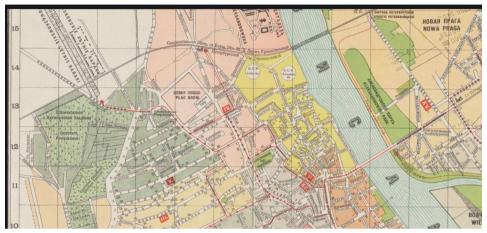


Figure 2. Żoliborz on the map of Warsaw with house numbers between 1908 and 1913 Source: author unknown, https://kolekcje.muzeumwarszawy.pl/pl/obiekty/10150/ (accessed: 20.11.2023).

Present Żoliborz is divided into three regions: 'Marymont-Potok', 'Sady Żoliborskie', and 'Stary Żoliborz'. Żoliborz is one of the most attractive and at the same time expensive districts of Warsaw. Żoliborz is meant to be the garden of Warsaw; therefore, many green areas are included in the district plan. They are perfectly integrated and sometimes even highlighted. Care has been taken to develop green areas here and they fit in with the architecture of Żoliborz Dziennikarski [Journalists' Żoliborz], Żoliborz Oficerski [Officers' Żoliborz], and Żoliborz Urzędniczy [Municipal Hall Żoliborz]. We can observe considerable areas of greenery in Żoliborz in comparison with other areas of Warsaw (Land development. Analysis for the development of a strategic diagnosis 2016).

Figure 3 shows the current division of \dot{Z} oliborz into regions and the location of \dot{Z} oliborz on the map of Warsaw.

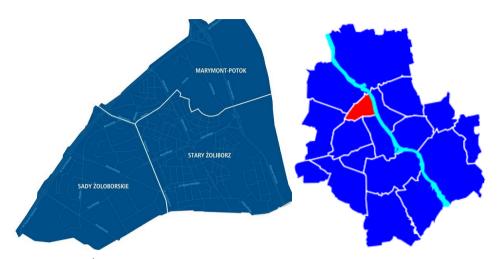


Figure 3. The Żoliborz district divided into three regions; on the left – the location of Żoliborz on the map of Warsaw divided into districts

Source: http://www.zdm.waw.pl/miejski-system-informacji/obszary-msi/dzielnica-zoliborz (accessed: 29.05.2022).

Żoliborz is one of the greenest districts in Warsaw, with the percentage ratio of green areas being 23.4%. Additionally, the district is also characterised by a high (almost 20%) ratio of recreational and leisure areas. 250 hectares of the district's 850 hectares of land is covered by dense greenery.

Żoliborz with its good natural conditions is a residential and recreational district. This image of a 'green district' is influenced by: Kaskada Park, Kępa Potocka Park, Stefan Żeromski Park, '*Sady Żoliborskie*' Park, and green areas on the Vistula, where the Museum of Sport is now located, and this area also used by the Olympic Centre.

When analysing the data about the area of green areas surface and the division on the number of population, it can be noticed that the Żoliborz district is the first one with the highest value of surface of green areal compared to the population (3.2 square km of green areas per 1,000 inhabitants). Comparing it to the average for Warsaw – which is 1.6 square km of green areas per 1,000 inhabitants – the surface of green areas in the Żoliborz district is twice bigger than average for Warsaw (Table 1).

Table 1. Population, area of green areas in square kilometres and size of green areas per 1,000 inhabitants in square kilometres in Warsaw districts in 2022

Districts	Population	Area of green areas in square km*	Surface of green areas per 1,000 inhabitants in square km*
Bemowo	128,995	120.13	0.9313
Białołęka	154,596	252.91	1.6359
Bielany	132,803	242.24	1.8241
Mokotów	225,496	341.20	1.5131
Ochota	80,587	174.60	2.1666
Praga-Południe	186,623	153.24	0.8211
Praga-Północ	60,387	103.64	1.7163
Rembertów	24,768	40.08	1.6182
Śródmieście	101,030	303.88	3.0078
Targówek	123,957	266.21	2.1476
Ursus	67,814	42.7	0.6297
Ursynów	151,345	231.13	1.5272
Wawer	86,854	157.46	1.8129
Wesoła	26,454	31.15	1.1775
Wilanów	51,603	131.09	2.5404
Włochy	49,332	69.29	1.4046
Wola	150,977	197.36	1.3072
Żoliborz	58,724	189.8	3.2321
Total	1862,345 3048,11 1,6367	3 048.11	1.6367

^{*} walking and recreation parks, green areas, street green areas, housing estate green areas, parks, green areas and housing estate green areas, cemeteries, and municipal forests.

Source: opracowanie własne na podstawie Banku Danych Lokalnych GUS (accessed: 20.11.2023).

The "Kępa Potocka" Park is a recreational area for walks and has many bicycle paths as well as routes for inline skaters. The designers of the park were landscape architects Elżbieta Jurkowska and Karol Kozłowski. Other attractions include the possibility of learning horse riding in a nearby horse farm on the banks of the Vistula River, and near the park there is a sports and entertainment centre

with a swimming pool and an archery range. The area of the park is currently part of the *Warsaw Protected Landscape Area*.

The **Stefan Żeromski Park** is a small park, which was opened in 1932, and it is the foreground of the Citadel. Work on the construction of the park lasted 10 years. Formerly, the fortifications of the Sokolnicki Fort were located here. The park was designed by Leon Danielewicz and Stanisław Zadora-Żeleński.

The **Kaskada Park** was established in 1951. It is the work of the architect Ludwik Lawina. The park area is just under 7 hectares and it is located between Armii Krajowej Avanue and Słowackiego Street. It has a very rich history. Originally, it was the location of the former Zwierzyniec and the Royal Park. The next owner at the beginning of the 19th century, General J. Rautenstrauch, introduced alleys and boats as well as gazebos and an inn. It was a place of occasional festivals and games. There are also a number of areas in Żoliborz with family allotment gardens intended for the residents of Warsaw.

Żoliborz was designed mainly on the basis of axial layouts, many of them possessing a narrative typical of the very popular in the first years of the 20th century concept of a *city-garden* with low-rise multi- and single-family housing (Journalists' Żoliborz, Officers' Żoliborz, and Municipal Office Żoliborz). According to the definition of urban composition elements adopted by Professor of Architecture Kazimierz Wejchert, there are numerous landmarks and outstanding landscape elements there (such as the Warsaw Escarpment) (Wejchert 1984: 51–91).

The structure of the district, like no other in Warsaw, is saturated with places (Orte), in the sense and understanding of Martin Heidegger (1974), which are intertwined with spaces (Räume), 'passageways', and spaces of living. The saturation of places in the concept of human relations is also emphasised as very important by the American geographer Yi-Fu Tuana in his philosophy of space. According to him, it is the number of 'places' and their emotional value that determines the identity of a home, a person's place of residence, defining their immediate surroundings (Yu Fi Tuan 2005). On the other hand, Florian Znaniecki, an outstanding sociologist of the city, draws attention to the dualistic value of "place" by dividing it into empty and occupied, close and distant, interior and exterior. He goes on to say that when thinking about space, one should always think in two directions, separating metrically measurable space from space in a purely social sense (Znaniecki 1938). In the case of Żoliborz, both of these values were defined almost perfectly. The correct, multidimensional, rich creation of "space" is naturally followed by outstanding architecture, which, according to Robert Venturi, is summed up in the following sentence: 'Architecture is created at the meeting point of internal and external forces'. This is what happened in Żoliborz, which can be proud of its outstanding architecture, often several dozen years ahead of its time. Professor Krzysztof Nawratek also writes about the uniqueness of Żoliborz in terms of urban planning:

Due to its 'internal and external attractiveness' (...), Żoliborz gives identity to its inhabitants, makes them citizens, but does not separate them from the city or try to be an autarkic utopia. Nevertheless, in some respects, especially economic, it can be referred to as an autonomous zone' (Matysek-Imielińska 2018).

Almost all new investments mentioned in the article are located in the southwestern part of Zoliborz and do not interfere with the network of natural connections. It should be mentioned that the green areas of Zoliborz are formed within three strip systems, two in the east-western direction and one in the north-southern direction (along the Vistula River). These bands are reinforced with 7 companion areas. They are all located outside the area of new investments, hence these investments do not affect the change in the availability of greenery for new residents. Investment opportunities for new housing complexes in the mentioned location appeared after the change of political system. Previously, this area – as it was defined in the last general plan for Warsaw from 1992 (before the change of the Act in the new political conditions) – functioned as category UT-12 (purple), i.e. service and technical function, storage and warehousing areas (Figure 4). Investor pressure in this area appeared only after 2007 due to the provisions in the new planning document – Study of Conditions and Directions of Spatial Development (2006 – with subsequent changes), where this area, as well as almost the entire Zoliborz, were included in the Zone Śródmieście Functional (dark grey colour of the area function).



Figure 4. On the left – a fragment of the General Plan of 1992 covering the Żoliborz district. On the right – the same fragment from the Study of Conditions and Directions of Spatial Development 2006, as amended.

Source: www.architektura.um.warszawa.pl/documents/12025039/26159038/plan1992NW.JPG/7b8eb57e-2a93-433d-45f6-3328cb170cb5?t=1634497947233; https://www.bip.warszawa.pl/dokumenty/radamiasta/uchwaly/2018-2023/1611_uch_zal_2_cz_2_kierunki_14_LIII_1611_2021.pdf

The district's terrain is very diverse. The current shape and territorial scope of the district was defined only in 1994. From 1951 until 1994, the borders of Żoliborz included the entire area of Bielany together with Młociny (today they constitute a separate district).

The first region that was incorporated into Warsaw in 1916 by Governor-General Hans von Beseler was Żoliborz Historic, part of the now defined Old Żoliborz. This is how a district of villas and single-family houses for officers of the resurgent Polish army around the Warsaw Citadel was created in the early 1920s, based on the idea of a garden city, known as *Żoliborz Oficerski*. Soon, already in the 1930s, on the other side of the Wilson Square, the WSM social housing estate appeared, intended for less wealthy social groups, mainly workers, with small but practical, well-lit, and designed apartments in low-rise multi-family buildings up to 4 floors.

The second region was urbanised much later, only in the years 1958–1973. In the area of the former village of Buraków, a very prestigious housing investment at that time and the only one with such an ambitious programme appeared, namely *Sady Żoliborskie*. Chief designer Professor Halina Skibniewska boasted that she had never built a block of flats made of prefabricated panels with low standard block of flats. The whole consisted of three colonies. The main design assumptions (which, unfortunately, were maintained only in the first colony) were based on three basic principles: architecture on a human scale (5 floors); intimacy (spot buildings with a centrally-located staircase inside and small distances between buildings – construction was carried out exclusively with truck cranes); and with each apartment having two view perspectives.

Sady Żoliborskie, apart from the investment of Professor Skibniewska, as well as the least homogeneous part of Żoliborz – the Marymont Potok area – were the least spatially developed area units of Żoliborz. Both the Marymont-Potok area and the Sady Żoliborskie area were expanded with 9- to 18-story high residential buildings, built at the turn of the 1970s and 1980s, but occurring only in a few locations in both of these areas.

1.4. The influence of cultural heritage elements on the market position of residential properties in Żoliborz

After regaining independence, in the interwar period, Żoliborz became an area of very intensive development. As a result, it was one of the best equipped, along with the city centre, in terms of sanitary networks and installations. Statistical data shows the following figures – out of the 4,963 apartments built between 1918 and 1944, as many as 4,848 were equipped with a water supply system, a toilet, and a bathroom, together with central heating, which accounted for as much as 97% (*Podstawowe Informacje ze spisów Powszechnych*... 2003). Of this number,

38% (1,895) were large apartments: 1,177 four-room apartments and 718 with five or more rooms (Podstawowe Informacje ze spisów Powszechnych... 2003). Żoliborz was very well-equipped with educational facilities, from kindergarten to high school and technical school (Pawłowski, Zieliński, 2008). This clearly demonstrates the importance of the district and its residents. The community of residents is also noteworthy. According to press advertisements of the time, the most popular item in houses, especially single-family ones, was the piano, which was a very high-cost item in the household budget (Kasprzycki 1999). And yet, although it concerned simple, basic standard single-family houses, it was common in Żoliborz. Żoliborz attracted pre-war intelligentsia living in the city centre or other areas of the city as a 'district of the future' (Kasprzycki 1999). As part of the WSM housing cooperatives, mainly two models of apartments were built here – those for intelligentsia and those for workers. They differed in size and in the presence of servants' rooms in the intelligentsia model (despite earlier polemics on the subject). On the other hand, workers were attracted here, paradoxically, by conservatism (Matysek-Imielińska 2018).

It is no wonder that such prominent figures in our history as General Mariusz Zaruski, General Gustaw Orlicz-Dreszer, Architect Edgar Norwerth (the creator of the AWF design), Architect Maciej Nowicki (co-author of the design of the UN headquarters in New York, as well as the Chandigarh design), and many, many others participated in the designing of Żoliborz.

The ranks of the Warsaw Housing Cooperative members also included Warsaw's intellectual elite, such as sociologists Maria Ossowska and Stanisław Ossowski, architects Barbara Brukalska and Stanisław Brukalski, Helena and Szymon Syrkus, and Bruno Zborowski (Matysek-Imielińska 2018).

The first step towards unblocking the city's development to the north was the takeover of the city by the Germans in 1916, after the outbreak of World War I, incorporating 8.210 ha into the city by the decision of General Governor Hans Beseler. For many years of tsarist rule in the 19th century, this was impossible because of the Citadel. Since the beginning of the Second Polish Republic, cooperative construction has developed, which used the Citadel's post-fortress areas.¹ Despite efforts to introduce modernist architecture, classicist and manor-

¹ There were about 20 housing cooperatives in Żoliborz in this period. The most popular were: "Osiedle Skarbowców" Spółdzielnia Urzędników Państwowych, Kooperatywa Mieszkaniowa Nauczycieli Szkół Średnich "Znicz", Spółdzielnia Spożywców, Spółdzielnia Mieszkaniowo-Budowlana "Strzecha Urzędnicza", Spółdzielnia Muzyków Opery Warszawskiej "Akord", Spółdzielnia Budowlano-Mieszkaniowa Robotników Chrześcijańskich "Zgoda", Spółdzielnia Budowlano-Mieszkaniowa Pracowników Dyrekcji Dróg Publicznych "Zimowe Leże", Spółdzielnia Budowlano-Mieszkaniowa Pracowników Pocztowej Kasa Oszczędnści "Ognisko V", Spółdzielnia Budowlano-Mieszkaniowa Pracowników Umysłowych Państwowej Wytwórnia Uzbrojenia, and

house one- and two-family housing prevailed, which made it possible to preserve and emphasize the uniqueness of green areas and their importance. Architects took advantage of the natural slope of the Citadel's foreground to emphasise the qualities of their designs. Each street had its own design 'secret' (Kasprzycki 1999). For example, in Marymont, the former palace of Maria Kazimiera Sobieski from the 19th century was transformed first into the seat of the Agronomic Institute and later into a chapel, and finally into the church of Our Lady Queen of the Polish Crown (preserved to this day) (Pawłowski 2008). Other noteworthy examples of architecture include the Henkel Square by Architect Romuald Gutt, the Brukalski villa, the Słoneczny Square by A. Jawornicki and K. Tołłoczko with buildings by R. Świerczyński and R. Gutt, and *Osiedle Dziennikarskie* by K. Tołłoczka (Piwowar, Krasucki, Powalisz 2014).

The construction of the *Żoliborz Oficerski* villa estate commenced in 1922 between the Vistula River and streets: Felińskiego, Krasińskiego, and Gen. Zajączka. In 1923, the construction of *Żoliborz Urzędniczy* commenced between Felińskiego, Krasińskiego, Stołeczna streets and Wojska Polskiego Avanue. The architecture and urban planning of this area was inspired by the concept of a 'garden city', and the manor style corresponded with it. R. Gutt, R. Świerczyński, T. Tołwiński, and K. Tołłoczko designed Żoliborz Oficerski. Żoliborz Urzędniczy is more uniform in terms of architecture, and its authors are R. Gutt, M. Kontkiewicz, K. Saski, and A. Bojemski. Efforts were made to recreate the buildings and street network from the 18th century, and to return to the old names (e.g. Śmiała Street). Single- and two-family villas and terraced houses were designed, while detached and semi-detached houses were located in Zoliborz Urzędniczy. The buildings of *Żoliborz Oficerski* were completed in 1927, and that of *Żoliborz Urzedniczy* – in 1926. The construction of Zoliborz Dziennikarski started in 1928 between Krasińskiego, Sułkowskiego, Karpińskiego and Dziennikarska streets according to designs by K. Tołłoczko. In addition to modernism, many projects, especially in the southern part of Zoliborz, were built in the formula of Dworek Polski [Polish Manor House] as a national concept in construction, constituted back in 1914, which was to dominate after the rebirth of the Polish state (Heyman 1976).

1.5. The relationship between real estate prices and their location in the vicinity of green areas

In recent years, a number of scientific works of significant importance have appeared, mainly concerning the correlation of the price of residential real estate and its location in the vicinity of green areas. One example is the doctoral dissertation defended at the Faculty of Architecture of the Warsaw University of Technology in

Fundusz Kwaterunku Wojskowego (Pawłowski, Zieliński 2008).

2019 by Dr. Eng. Arch. Magdalena Drouet entitled *The value of environmentally friendly urban solutions on the municipal commercial real estate market with particular emphasis on the impact of green areas.*² The author presented the close correlation between the price and location of real estate, according to which the proximity of green areas at a distance of less than 200 m raises prices of a square meter of residential real estate by as much as 3%. The research was conducted in the area of the capital city of Warsaw, mainly in Żoliborz.

In the category of apartment rentals, the real estate market in Warsaw, according to experts, does not consider the proximity of a park as a factor increasing the financial attractiveness of such an offer. On the other hand, such factors as distance from an underground station, distance from academic centres, and distance from business centres all increase its attractiveness.

The prices of rented apartments in Warsaw over the past years have varied depending on the district, the distance from the underground, the size of the apartment, the age of the building, and the distance from academic or business centres. We omit here the standard of the premises (Report by Biuro Nieruchomości MOŚCICKI Sp. z o.o. ul. Belgradzka 4, 02-793 Warsaw, 04-07 April 2022).

However, in the case of rental prices for retail space, this increase not only occurs, but is even stronger, by as much as 27%, and in the case of food service establishments – by as much as 59%. At the same time, the author, Dr. Arch. M. Drouet, notes that these dynamics cannot be confirmed in the area of rental of usable space in all residential and service sectors combined, which was also noted by the experts quoted earlier.

The promotion of residential investments

Table 2 presents a list of ten new investments on the primary market in the Żoliborz district and the way they are promoted online. It was also indicated which offers mention the green areas of Żoliborz, the culture or history of Żoliborz, and which indicate the amenities related to the good connection of this district. Advantages and disadvantages in Table 2 show if the investment was close to green areas (up to 200 meters of up to 2 km), and if in the promotion of the investments there was a reference to cultural property or reference to other facilities.

² [The value of pro-ecological urban planning solutions on the municipal commercial real estate market, with particular emphasis on the impact of green areas].

Table 2. List of 10 new residential investments in Żoliborz

	Residential complex						
1	General view	Orientation	+	_	_	+	+
SKANSKA – Mickiewicza 04 – ul. Rudzka			Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	"The idea was to create a space with a park-like character, isolated from the nuisance of the city. This was achieved by introducing linear, external buildings surrounding the interior with buildings immersed in greenery. Their free positioning creates an irregular framework for the interpenetrating courtyards, which are unique thanks to the preservation of many old, tall trees, large expanses greenery and the natural, hilly terrain." (www.mieszkaj.skanska.pl/nasze-projekty/osiedle-mickiewicza/osiedle-mickiewicza)				irregular		
2	Residentia	l complex		+	+	_	_
	General view	Orientation		,	'		
Dom Development – Żoliborz artystyczny			Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	The Żoliborz Artystyczny estate – its new stages are being built opposite the already completed part – between Powązkowska and Przasnyska Streets. As before, the main idea was to create an open urban space – a generally accessible zone with passages, squares and numerous service points. The new stages will feature modern playgrounds, sculptures and internal green courtyards. The architecture is created by simple and calm proportions of the facades complemented by the works of artists, which in effect creates an extraordinary place to live.						

3	Residentia	l complex				+		
Dom pod szóstką	General view	Orientation	+	_	+	+	+	
– Sady Žoliborskie		STOCKES CIE	Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)	
Slogans from advertising materials promoting individual housing developments	Dom Pod Szóstką is located in a quiet, green area at 6 Ficowskiego Street in Warsaw's Zoliborz district. It is a quiet residential street about 200 m away from Powązkowska Street. The surroundings are conducive to relaxation and at the same time offer good infrastructure – the district continues to develop dynamically. In the neighbourhood there are entertainment and shopping centres: Arkadia and Klif, trendy bars and restaurants, kindergartens and schools and service points. What characterises this part of Warsa are numerous parks and green areas in the immediate and distant vicinity: Zoliborskie Orchards, Olszyna Park, Lasek na Kole. (https://www.gethome.pl/inwestycja/dom-pod-szostka-warszawa-sady-zoliborskie-4991)				ffer good g centres: t of Warsaw			
4	Residentia	l complex	+	+	_	_	_	
Modern Żoliborz Residence	General view	Orientation	,	,				
		Modern Zoliborz, Residence un Przasnyska 6	Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)	
Slogans from advertising materials promoting individual housing developments	It is in this prestigious and enchanting district of Warsaw that 139 modern flats will be built, designed in accordance with the latest architectural trends. The estate will consist of two, guarded and monitored buildings with seven and nine storeys. Both will be constructed exclusively using ecological building materials. An underground garage for residents, a playground, lift lobbies finished with natural stone and mineral plaster facades are just some of the advantages of the investment. (https://www.gethome.pl/inwestycja/modern-zoliborz-residence-warszawa-sady-zoliborskie-5003)							

5	Residentia	l complex					
Żoli Żoli	General view	Orientation	+	_	+	_	_
		MAPAREACTI	Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	Welcome to the heart of Zoliborz, the greenest and quietest district of Warsaw. It is here, right next to Grunwaldzki Square, that Zoli Zoli — modern flats in a neighbourhood with tradition — is being built. The name Zoliborz comes from the French Joli Bord, meaning "Beautiful Shore". Over 150 years have passed since this term was coined, a whole century has passed since the district wa incorporated into Warsaw — and the name is still relevant. Zoliborz is a beautiful place with the largest area of greenery per inhabitatin Warsaw. The personality of Zoliborz inhabitants and the character of its location are the strength that attracts new residents like a magnet. Become one of them and live beautifully! (www.zolizoli.pl/#inwestycja)					i Bord, e district was per inhabitant	
6	Residentia	l complex					
Żoliborz Artystyczny	General view	Orientation	_	+	_	_	_
– Kolonia Anny Jantar			Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	The focal point of the development will be the Andrzej Wajda Square with its pond, cafés and restaurants, which will be connected to Powązkowska Street through a publicly accessible passage for the actor Zbigniew Zapasiewicz. Ultimately, 1256 flats will be built in the new development. — The key idea of the new Żoliborz Artystyczny is to create an open urban space with numerous publicly accessible passages, squares and service points, similarly to the already implemented part of the project — as the representatives of the investor say. — Art, artists' works are an integral part of the architectural concept of the estate. The project of the investment was created by the HRA Architekci studio. (https://www.rp.pl/nieruchomosci/art9737841-mieszkania-w-kolonii-anny-jantar)						

7	Residentia	l complex				_	
Osiedle Madison	General view	Orientation		_	_	т	_
Apartments			Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	Madison Apartments is an intimate housing estate ideal for those looking for a dream flat close to the centre of Warsaw, but at the same time surrounded by greenery and free from the hustle and bustle of the city. (www.madisonapartments.pl/pl/o-inwestycji)						
8	Residential complex		_		+		
Młody Żoliborz	General view	Orientation	'	_	'	_	_
	Whally is		Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	Two elegant buildings with 383 functional flats ranging in size from 24 to 94 sqm, a playground for children and a co-working space, i.e. a separate area for work and study. A characteristic element of the estate is a green spacious patio and an attractive location near the city centre with convenient transportation. (https://asbud.com/inwestycje/osiedle-mlody-zoliborz)						

9	Residentia	al complex	lex				
Żoliborz Artystyczny	General view	Orientation	_	+	_	_	_
2018–2020			Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing developments	The latest edition of Zoliborz Artystyczny is a continuation of a unique concept successfully implemented since 2013. We have de an attractive space – this is where urban art meets functional solutions and modern design blends with the historical heritage of district. Zoliborz Artistic is a place created to please and surprise. (https://www.domd.pl/pl-pl/warszawa/lista-inwestycji/osiedle-zoliborz-artystyczny)						
10	Residential complex						
Dom pod Oaza	General view	Orientation	+	_	+	+	+
przy Włościańskiej		S E O D O W I E C Paul Olayma Google Maymortil Maymo	Appeal to green areas	Reference to cultural property	Reference to facilities	Proximity of green areas (up to 2 km)	Proximity of green areas (up to 200 m)
Slogans from advertising materials promoting individual housing	We would like to invite you to the northern region of Warsaw, the charming and peaceful district of Zoliborz, where at the intersection of Włościańska and Gąbińska streets a new, unique residential investment is under construction. Oaza at Włościańska is an intimate building, which will consist of flats, commercial premises and a two-level underground garage. Our investment is characterized by						

developments

a high standard of finish, attractive layouts, excellent location with a very well developed public transport system, location in the

immediate vicinity of green areas, and wide access to services, high level of education and leisure offer. (www.opw.com.pl)

Source: own elaboration based on: www.mieszkaj.skanska.pl, www.ceny.szybko.pl/Warszawa-%C5%BBoliborz-ceny-mieszkan.html, www./warszawa.wyborcza.pl/warszawa/7,54420,27099964,gdzie-w-warszawie-mieszkania-drozeja-najszybciej.html, www.mieszkaj. skanska.pl/nasze-projekty/osiedle-mickiewicza/osiedle-mickiewicza-iv/?gclid=Cj0KCQiArt6PBhCoARIsAMF5wagipVlCWDziuj fZlF3YL754xiX4ZHncQlqorDRZ0twBePMmPERtm0waAjiAEALw_wcB), www.rynekpierwotny.pl/oferty/dom-development-sa/zoliborz-artystyczny-warszawa, https://www.gethome.pl/inwestycja/dom-pod-szostka-warszawa-sady-zoliborskie-4991, https://www.gethome.pl/inwestycja/modern-zoliborz-residence-warszawa-sady-zoliborskie-5003, https://www.rp.pl/nieruchomosci/art9737841-mieszkania-w-kolonii-anny-jantar, www.madisonapartments.pl, https://asbud.com, www.opw.com.pl, https://warszawa.wyborcza.pl.

When analysing the median prices of apartments in Warsaw in 2021, we can observe that prices on the primary market in Żoliborz amount to 12,600 PLN per square meter and are among the highest. The secondary market prices of apartments in Żoliborz are 1,000 PLN lower per square meter and in 2021 they amounted to 11,400 PLN per square meter. Data from the year 2023 is still showing that the Żoliborz district is one of the most expensive in the flats markets in Warsaw. However, the analysed declared prices are higher, the sales prices are already lower, so the situation on the sales market in Żoliborz is changing.

Table. 3. Average prices of apartments in selected districts of Warsaw (as of January 2023)

	Average price of flats per square meter	Change in the last 12 months
Wilanów	15,149	-3%
Żoliborz	16,365	+3%
Wola	16,070	+2%
Śródmieście	19,996	+7%
Białołęka	10,444	+0%
Targówek	11,699	+1%
Praga Południe	13,194	-0%
Wesoła	10,199	-2%
Ursynów	13,722	+1%
Mokotów	15,174	+1%
Ochota	14,331	0%
Włochy	13,291	+1%
Bemowo	12,625	+0%

Source: https://www.ceny.szybko.pl (accessed: 31.01.2022).

In recent years, there has been a significant increase in the prices of flats in \dot{Z} oliborz. In 2022, it is at the level of 15,000 PLN per square meter, in 2021 it was 14.000 PLN per square meter, while in 2000 it was at the level of 12,700 PLN per square meter (and in 2019 – 11,500 PLN per square meter). Within 4 years, an increase in average apartment prices was recorded in \dot{Z} oliborz by as much as 30%.²

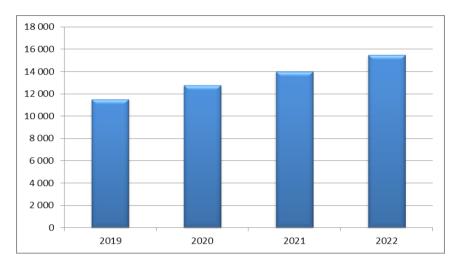


Figure 5. Apartment prices in Warsaw's Żoliborz district in the years 2019–2022 Source: Compiled from: https://www.ceny.szybko.pl/Warszawa-%C5%BBoliborz-cenymieszkan.html (accessed: 31.01.2022).

Analysing the map of average prices of apartments in Warsaw from the primary and secondary market, we can observe a very high price of real estate in Żoliborz (above 9,500 PLN per square meter – Figure 6).

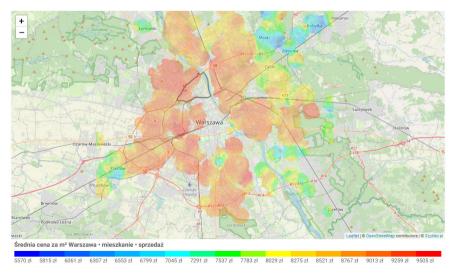


Figure 6. Average prices of flats in Warsaw in 2022

Source: https://www.ceny.szybko.pl/Warszawa-%C5%BBoliborz-ceny-mieszkan.html~(accessed: 31.01.2022).

The real estate market in Warsaw - the seasonality of transactions

For the purposes of this article, the authors were provided with two reports on the characteristics of the Warsaw market in selected agencies operating in the Warsaw real estate market prepared in April this year. These reports were prepared by MAXON Nieruchomości Sp. z o.o. and Biuro Nieruchomości MOŚCICKI Sp. z o.o.

According to the opinion of Biuro Nieruchomości MOŚCICKI Sp. z o.o., the Warsaw market has always shown some seasonality:

Prices rose in proportion to the increase in the society's wealth and demand. Demand turned out to be the most important factor, which determined price fluctuations depending on the season.

The functioning of the Warsaw real estate market as a result of the COVID-19 pandemic

The significant change that took place on the Warsaw market after March 20th, 2020 (https://www.gov.pl/web/koronawirus), i.e. after the announcement of the main restrictions related to the COVID-19 pandemic, is also important for the overall picture and worth emphasising. Here is an excerpt from the report of Biuro Nieruchomości MOŚCICKI Sp. z o.o.

(...) The pandemic changed the whole situation. Remote working, the return to the market of apartments previously in short-term rental caused a large supply and significantly reduced the number of people looking for a flat.

Changing situation on the Warsaw real estate market after February 24th, 2022

It is impossible to write about the current situation on the Warsaw real estate market without mentioning the wave of refugees coming to Warsaw as a result of the Russian military aggression in Ukraine. It is worth mentioning at this point that even before February 24th, Warsaw was a place where immigrants created a lively demand for housing. They were mainly newcomers from the East – apart from very numerous Belarusians (after the wave of fiercely repressed protests following the fraudulent, according to the opposition, presidential elections last year), there were also Russians and Ukrainians, as well as citizens of India and Nepal. From 24th February to 24th April, 2022, nearly 3 million refugees from Ukraine, mostly women and children, arrived in Poland. Warsaw, which has always had the most extensive accommodation in the country, has naturally become the main destination for refugees from the East.

The situation after February 24th, 2022, is described in the following excerpt from a report by the MAXON real estate agency:

The outbreak of the war in Ukraine has affected several aspects of the Warsaw real estate market, in some cases with significant dynamics.

The supply of rental housing has decreased – a large proportion has been allocated to temporary or longer-term housing for refugees. There are fewer and fewer housing units on the market, so their owners can afford to raise rental prices.

The sale of apartments has slowed down slightly so far. This is a result of, among others, customers' uncertainty, caused not only by the events in Ukraine, but also by another increase in interest rates.

Prices of apartments for sale, initially in the primary market, may rise due to further increases in the prices of construction materials. These had already been taking place long before February 2022, but now, due to sanctions imposed on Russia, the prices of energy, fuel, steel, cement, wood, and metal materials imported from the East have risen even more strongly.

This situation is clearly confirmed by the excerpts from the second report of Biuro Nieruchomości MOŚCICKI Sp. z o.o.:

All the previous rules of the real estate market have changed with the influx of refugees. This change is revolutionary. Prices have suddenly skyrocketed. For example, the average price of a two-room flat increased from 2,500 PLN to 3,000 PLN on average.

1.6. Results and conclusions

Apartment prices in Warsaw's Żoliborz district significantly exceed the average prices of apartments in the city, both on the primary and secondary market. This is related to the type of development in this district, the availability of public and private services, and a large number of green areas. The transport accessibility of this district and its connection with the city centre by a network of buses, trams, and the underground is also important. It should be remembered that the standard of living is related to the actual living conditions. What is important is the level of satisfaction of material and cultural needs realised through the stream of goods and paid services (Piasny 1993). Moreover, the level of satisfaction with the choice of a given location is related to the level of consumption of goods and services, including public goods, as well as various possibilities of leisure activities (Gillingham 1980).

Ads from the primary market in Żoliborz most often mentioned its green areas (7 out of 10 analysed offers). However, only four investment properties were up to two kilometres from green areas, and only three of them were 200 metres away. The promotion also mentioned its transport connection (5 out of 10 analysed offers), as well as the culture or history of Żoliborz (4 out of 10 analysed offers). This means that green areas are used in the promotion of the new investments; however, the location of the analysed offers shows that only 30% of them are located close to the green areas (up to 200 metres) and only 40% are up to two kilometres from green areas. That means that the hypothesis from the beginning of the article, concerning the location of the new investments, cannot be confirmed, and the hypothesis about using the green areas in promotion can be confirmed (70% of analysed investments are doing that).

Developers focus a large part of their marketing message on the green areas and parks of Żoliborz when planning investments. The Polish name of the district – Żoliborz, almost literally, means "beautiful shore" in French. The announcement of the 'Żoli Żoli' housing project also refers to the French name of the district. In the spatial planning of Żoliborz, attention has always been paid to parks and green areas. They were well-integrated into the district and constituted an important element of its landscape. Owing to green areas, Żoliborz is called the 'garden district', which is a very important element of marketing for new residents or people willing to invest in housing here. However, new investments are not going to block or restrict access to the green areas, because most of them are usually very small investments. New planned investments are using the terrain of old industrial Żoliborz and they are not blocking the access to the natural areas or they are not build on green areas of district.

The recent demand pressure mentioned in the article, caused by a wave of refugees from Ukraine and Belarus, makes it impossible to clearly observe the trend of changes on the real estate market in Warsaw in the area of Żoliborz in the years 2021–2022. However, the authors consider the information provided above to be an extremely valuable depiction of the *Signum Temporis* phenomenon.

The material collected in the first part of the paper makes it possible to point to a clear correlation between the locations of new residential investments in Żoliborz and their spatial connotation as being adjacent to green areas – even if this is not entirely the case. This is clearly evidenced by data which shows that direct proximity of up to 200 metres was demonstrated by only 3 out of 10 surveyed investments, although the reference to 'greenery' in advertising and promotional materials was present in as many as 7 out of 10 surveyed examples.

The new residential investments in Zoliborz have higher prices in relation to average apartment prices in the capital city in the same distance to city centre. Green spaces are highlighted in the advertising and promotion of new investments in the Zoliborz district, although the distance to green areas in this investments

is very diversified. The other conditions – transportation or cultural aspects – are more rarely shown in the advertisement of the analysed Żoliborz investments.

The unique character of the district's identity as an exceptional local community providing a good neighbourhood and the cultural values present there no longer ensures priority in Warsaw's real estate market. Apart from the city centre, increasingly, the competitiveness of Żoliborz as a district loses out to Mokotów, located in the south (at transaction prices), whose price level is boosted by what is presumably a convenient location in relation to the capital's main airport and the location of a new business centre (Służewiec).

The validity, generalisability, and the applications of the research

The proximity of green areas and the possibility of recreation is a very important factor in attracting new residents to urban areas. The example of Zoliborz, the green district of Warsaw, presented in the article, can be used for a wide range of applications. Among other things, it is worth noting that although almost all the names of new, leading residential investments in Zoliborz are based on references to green areas, it turns out that this is not enough in the competition for the primacy of the price per square metre on the Warsaw residential real estate market. Despite the masterful promotion of developers, sales prices are falling in favour of Mokotów and even Śródmieście. As indicated in the text, Żoliborz loses its intelligentsia profile and the green character of the district. This is because, on the one hand, there are no new parks and, on the other, there are no new investments in culture (except multiplexes within shopping centres). The only operating theatre in Żoliborz - Comedia Theatre, built in the early 1950s right next to XX, which was the project of the avant-garde architects S. Brukalski and B. Brukalski – had to introduce a radical vaudeville and entertainment repertoire to survive. The example of Zoliborz can be an instructive lesson both for developers and local authorities of other green districts - such as Gołabki, Włochy, or Wilanów, showing that perfectly executed marketing alone is not enough without real financial injections to maintain the legend and genius loci.

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