

GREEN SPACE REVITALISATION IN HISTORIC URBAN CONTEXTS: IMPACT ON CULTURAL HERITAGE CONSERVATION IN KRAKÓW

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Abstract

This study analyses two selected green public spaces located within the historic urban fabric of Kraków, a provincial capital in southern Poland: Wisława Szymborska Park on Karmelicka Street and the green space at Axentowicza Square. The former area historically served as a barracks parade ground and later as a car park, while Axentowicza Square, whose origins date back to the early 20th century, underwent modernization in 2021–2022. The analysis considers the historical context of each site and the influence of surrounding heritage on their present form. The research is based on desk studies, including a review of relevant literature and archival materials, complemented by site visits to assess the current state of development. Field analyses were supported by photographic documentation. The study evaluates the extent to which green spaces located in historic settings respond to contemporary functional and social requirements. The findings are a contribution to academic discussion and may also support practical decision-making related to the revitalization and modernization of public urban spaces of historical significance.

Keywords: Historic urban area; Public space; Modernisation; Revitalisation

Introduction

This paper discusses the effects of adapting selected public spaces to new uses and the results of an assessment of modernization measures carried out in these areas, considering the local place-based context and its historical character.

The following research questions are explored in this paper: the central question of this study is whether the historical environment exerts an influence on the image and quality of the analyzed area. The following question is posed: is it possible for a space that has undergone transformation in a historical environment to meet the contemporary requirements of its users?

In order to address these inquiries, a comparative analysis was conducted on two green public spaces. The initial case study is Wisława Szymborska Park, which is situated within the dense urban fabric of Kraków's city center, on Karmelicka Street. This location is approximately 200 m from the Main Market Square and around 700 m from the second area analyzed.

The park is situated within the former *jurydyka* of Kraków-Piasek. Garbary is currently located within the confines of District I Old Town and is situated in an area that has been designated a historical monument.

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The Historical Architectural and Urban Complex of Kraków was established in 1994 [1]. During the medieval period, the park was situated beyond the city’s defensive barriers. A monastery of the Discalced Carmelites was constructed in its immediate vicinity in the 14th century. The garden tradition was an integral component of the site, exemplified by the monastic gardens and the entertainment garden dubbed Raj (Paradise), which were located in the vicinity of the Tobacco Products Factory (10 Dolnych Młynów Street) that was established in the late 19th century. Until the mid-19th century, the area featured sparse development. A dirt road (now Rajska Street) ran nearby, extending the axis leading from the Church of the Visitation of the Blessed Virgin Mary to a complex of mills (Dolnych Młynów Street) [1]. Initially, the area of Wisława Szymborska Park served as a parade ground, which was part of the Franz Joseph I Barracks of the Austro-Hungarian Army – renamed after Tadeusz Kościuszko after World War I (Figs. 1 and 2). The former barracks building, built between 1858 and 1862 to a design by Feliks Książarski, has served as the seat of the Voivodeship Public Library since 1992 [1], [2] (Figs. 3 and 4).



Fig. 1. View of the barracks parade ground. Source: Fotopolska, <https://fotopolska.eu/597573.Cracow-ul-rajska-wojewodzka-biblioteka-publiczna.zdjecie.html?o=u21984> [accessed: 11.08.2025]

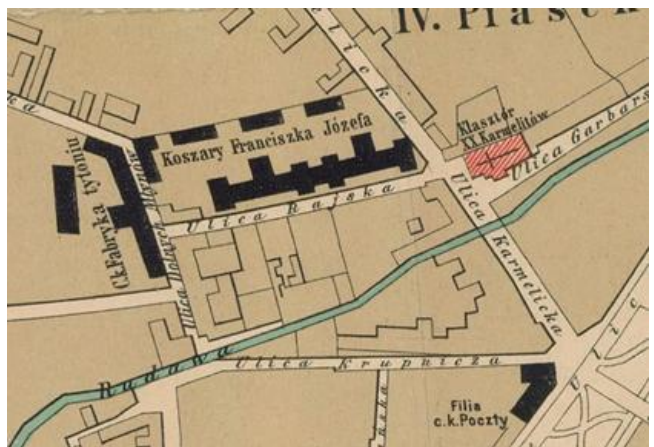


Fig. 2. Franz Joseph I Barracks. The latest plan of the Royal Capital City of Kraków, 1898. Source: Dawne Mapy Krakowa, https://dawnemapyCracowa.pl/map/1916-najnowszy-plan-stolecznego-krolewskiego-miasta-Cracowa/#16/50.0695/19.9164/1916b_Cracow-1898_Cracow [accessed: 11.08.2025]



Fig. 3. Voivodship Public Library. Front view. Present condition



Fig. 4. Provincial Public Library, present condition

The barracks complex at 1-3 Rajska Street was entered in the register of monuments in 1993 under No. A-960. The structure was encircled by rows of trees on the north and west sides, as evidenced by the presence of Dolnych Młynów Street to the north and west [2]. Following the transformation of the area, the former parade ground was converted into a car park [4], [5]. To this day, the neighborhood of the park features compact 19th- and 20th-century buildings that are listed in the register or inventory of monuments with residential and service functions [6], [7] (Figs. 5 and 6).



Fig. 5. Historical surroundings of the park, present condition



Fig. 6. Historical environs of the park with a view of the Church of the Visitation of the Blessed Virgin Mary

Following public consultations on the park’s design, which was created by a team from the Gajda Architektura Krajobrazu design firm in collaboration with architect Charlie Hussey from Edinburgh and landscape designer Heiner Luz from Munich, construction work began at the end of 2021. The project site had previously been explored by archaeologists. The complex was inaugurated on 2 July 2023, opening its doors to the public [8], [9].

The design was conceived with the intention of alluding to the horticultural history of the place and the work of its benefactor. In reference to place-based tradition, the following zones were distinguished: a fruit tree orchard (situated at the entrance from Karmelicka Street), a flower meadow (positioned symmetrically along a curved path), a lawn (alluding to the parade ground – an unobstructed view of the erstwhile barracks building, situated between the flower meadows), a grove with taller trees (positioned at the entrance from Dolnych Młynów Street), and four gardens located between the other zones, on a scale reminiscent of intra-block gardens. A system of ponds and canals has been integrated into the overall design, with the integration of these features being focused on two primary avenues. The first of these is the main avenue, along which the system is located. The second is a tree-lined avenue, which serves to enhance the aesthetic appeal of the surroundings. The design incorporates a water retention system that supplies the ponds and irrigates the local vegetation [8] (Figs. 7 and 8).



Fig. 7. View of the water channels in the park



Fig. 8. View of the water channels and greenery in the park

The second area of research concerned the green space at Axentowicza Square in Kraków. The property is located approximately 700 m from Wisława Szymborska Park, based on map-based measurements. The site is located in close proximity to residential villa buildings, including the distinctive Jadwiga villa from 1923, as visible in figures. 9 and 10, which was designed by Samuel Singer, and residential and commercial buildings, such as the distinctive corner tenement house at the intersection of Axentowicza Square and Sienkiewicza Street from 1927, which was designed by Jan Rzymkowski (Fig. 11). In the immediate vicinity of the park, on the eastern side, there is St. Stephen's Church (Figs. 12, 13 and 14) and the historic building complex of Aleja Trzech Wieszców. It is evident that all of the aforementioned buildings are listed in the register of monuments [6], [7].



Fig. 9. Jadwiga Villa, present condition



Fig. 10. Fragment of Kazimierz Wielki Square (nowadays Axentowicz Plan) with a view of, among others, Villa Jadwiga (1928)
Source: NAC Archives <https://www.szukajwarchiwach.gov.pl/jednostka/-/jednostka/5957072> [accessed: 11.08.25]



Fig. 11. Corner tenement house designed by J. Rzymowski. Present condition



Fig. 12. St. Stephen's Church, present condition



Fig. 13. St. Stephen's Church from the south-west (1938)

Source: NAC Archives https://photos.szukajwarchiwach.gov.pl/30d681a86ea9a178aac9069ae9816d45584d4362501d3a66d0336e67fc42ffa3_mid [accessed: 11.08.25]



Fig. 14. Buildings in the immediate vicinity. Present condition

Axentowicza Square (formerly Kazimierza Wielkiego Square) was laid out between 1910 and 1914 following the incorporation of Nowa Wieś into Kraków (Fig. 15), as part of the development of the area following the demolition of the ramparts and bastions of the Kraków Fortress. Subsequently, the development plan underwent revisions in accordance with the design by Zdzisław Mączyński, the architect of the historic St. Stephen's Church, visible in Figs. 12 and 13, whose façade still forms the eastern end of the complex. At that time, a green square with a pedestrian path lined by a hedge, with groups of trees in the corners, was introduced, later designated Skwer im. Więźniów Obozów Zagłady, which still exists today. The green public space underwent a revitalization project during 2021–2022 [10] (Fig. 16). At present, the central part of the composition consists of a lawn with illuminated aged trees. The space is equipped with long benches and illuminated water condensation nozzles, as visible in Figs. 17 and 18.

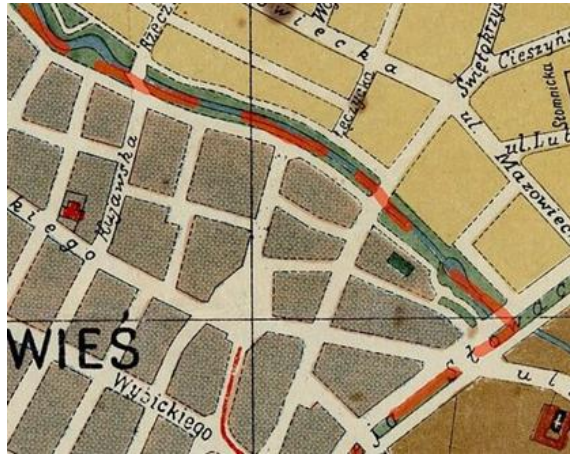


Fig. 15. Fragment of the 1916 Plan of Kraków, including the present-day Axentowicza Square.
Source: https://dawnemapyCracowa.pl/map/1916-najnowszy-plan-stolecznego-krolewskiego-miasta-Cracowa/#16/50.0695/19.9164/1916b_Cracow-1898_Cracow [accessed: 11.08.25]



Fig. 16. Fragment of Axentowicza Square before revitalization
Source: https://d-art.ppstatic.pl/kadry/k/r/18/22/5f50f80e39027_o_xlarge.jpg [accessed: 11.08.25]



Fig. 17. Fragment of the path along the green space at Axentowicza Square, present condition



Fig. 18. Fragment of Axentowicza Square after revitalization, present condition

State of research

The issue of urban park spaces has been addressed in literature in the context of urban planning, landscaping, and socio-cultural aspects. A plethora of studies have been conducted that emphasize the importance of parks as an integral component of the urban greenery system. A review of the relevant literature indicates a correlation between the spatial composition of urban parks and their immediate surroundings. Furthermore, they indicate the typology of these relationships [11]. Detailed analyses cover the development of green areas both in Poland and worldwide from the 19th to the early 21st century, taking into account their historical development, contemporary trends in their design, and changing social expectations [12]. The present state of research also focuses on issues related to conservation procedures that are important in the process of reconstructing historic green areas, pointing to the usefulness of archival research in architectural and landscape design for historic green areas, with the aim of, among other things, restoring them [13]. As demonstrated by the authors' own research and literature review, greenery is a key element of both historical and contemporary landscapes.

This has prompted an analysis of parks in historic settings, which have been created as a result of revitalization measures that consider contemporary trends. It is important to acknowledge the impact of revitalization on forming a place's new identity [14]. A review of the literature permitted a historical analysis of selected green public spaces in Kraków in relation to research on the urban development of the city [15]. As demonstrated by the extant research, a study was conducted using a map of the area and its surroundings to demonstrate the changes in the topography of this part of the city, using the example of Łobzów in Kraków [16]. An analysis was conducted of changes in the topography of the historic center of Kraków over the last millennium. The reconstruction, in the form of a model, was based on available contour maps, derived from archaeological and geotechnical research, and aerial laser scanning [17]. In the extant literature, there have been attempts to objectify the assessment of residential areas, which can be adapted to the analysis of specific park spaces. In order to achieve this objective, the author employed an integrated quality index (IQI) in her preceding studies [18]. This parametric research tool is employed in conjunction with the descriptive method. She conducted research on the quality of public spaces in relation to cultural heritage in selected cities of the Podkarpackie Province [19], [20], [21]. Concurrently, multi-criteria and interdisciplinary research was conducted in the same area, utilizing tools such as urban analysis and sociological analysis [20].

Research methods

The research methods employed in the study encompassed an analysis of the existing body of research addressing the historical evolution and transformation of the analyzed areas, the preservation of heritage elements within revitalization and modernization processes, and the role of parks as recreational, social, and cultural spaces in relation to historic buildings.

In addition, archival research and expert analyses were conducted. The archival research was based on the examination of source materials, including photographs and historical maps dating from the late nineteenth century to the present day. The sources consulted comprised press releases from the years 2021–2023, municipal and national institutional websites (including those of the Municipal Greenery Authority of the City of Kraków, the City of Kraków, and the National Heritage Institute), as well as digital archival catalogues of the National Digital Archives.

For the purposes of expert analysis, a set of assessment criteria was defined and subsequently verified through site visits. This approach enabled an evaluation of the impact of the surrounding environment on the image and quality of the parks, taking into account factors such as area vitality, visual values, the range of services, and the historical significance of the surroundings. The selected parks were assessed in terms of their compliance with contemporary requirements, including accessibility, diversity of services (with particular attention to proximity to cultural assets), and level of development, as well as the visual and functional qualities of both the parks themselves and their immediate surroundings.

The application of complementary research methods enabled an objective evaluation of public green spaces, demonstrating that their location is closely linked to the historical urban fabric of Kraków.

Analysis of research results

The results of the historical analysis of the green public spaces in question identified significant stages of their transformation. Historically, Wisława Szymborska Park functioned as the parade ground of the Franz Joseph I Barracks of the Austro-Hungarian Army (subsequently renamed after Tadeusz Kościuszko following the First World War). The site is located in close proximity to a military structure – the library, which was constructed in the present day. The site is bordered by 19th- and 20th-century tenement houses, which currently feature residential and commercial uses, and the buildings of the Carmelite monastery, including the Church of the Visitation of the Blessed Virgin Mary (whose history dates back to the 17th century), visible from Karmelicka Street.

The interior of the park is enclosed on two sides. From Rajska Street, the Provincial Public Library in Kraków is visible. This historic 19th-century building was designed by Felix Księżarski and underwent a period of modernization in order to accommodate its new function between 1985 and 1995 [11]. Conversely, the park is situated adjacent to Dolnych Młynów Street, which features historical industrial buildings dating back to the 19th century, including a former tobacco and cigar factory, tenement houses, and a contemporary service building [6]. The park is located adjacent to the aforementioned Karmelicka Street, which has maintained its historical character.

The green space at Axentowicza Square is located a short distance away, approximately 700 m in a straight line (around 850 m along the walking route) from Wisława Szymborska Park, according to estimates derived from digital map measurements. Its immediate environs comprise St. Stephen's Church, which was designed by Zdzisław Mączyński and constructed between 1933 and 1939, in addition to Modernist tenement houses situated along Kazimierza Wielkiego Street. The northern side of the space is characterized by villas dating from the early 20th century, including the distinctive Jadwiga villa, which was designed by Samuel Singer in 1923 [6], [7].

The impact of the surroundings on the image and quality of Wisława Szymborska Park was assessed by evaluating several factors. These factors included the vitality of the area, its visual values, the service program, and the historical value of the surroundings.

Karmelicka Street is a vibrant location, both due to its central position within Kraków and the wide range of services it provides. These include cultural uses such as a library, a monastery church, as well as schools, cafés, restaurants, shops, beauty salons, and hairdressers. It is evident that Karmelicka Street is a highly popular location. The aesthetic qualities of the buildings are defined by the uniform line of the frontage, the scale of the buildings, and their stylistic consistency, including the preservation of the horizon of the roof cornices. A significant advantage of the location is its authenticity, which is preserved through the maintenance of the historical continuity of the street itself, the details on the façades, and the continuity of its function in the city.

Kazimierza Wielkiego Street and Axentowicza Square are areas characterized by higher traffic intensity, a phenomenon attributable to their proximity to Aleja Słowackiego and the presence of services primarily situated on the ground floors of tenement houses. The green space is accompanied by cultural buildings, including a church, a library branch (on Sienkiewiczza Street), a museum branch (on Pomorska Street), a radio station, schools, and kindergartens.

The architectural value of the area is determined by the presence of notable buildings, including the distinctive Jadwiga villa, a tenement house situated at the intersection of Sienkiewiczza and Axentowicza Streets, and St. Stephen's Church. The condition of the architecture in the park's surroundings, the scale and condition of the greenery, and the coherence of the space (defined frontages) were assessed positively.

The parks selected for the study were assessed in terms of their compliance with contemporary requirements, taking into account the following criteria: accessibility of the area, diversity of services, including proximity to cultural assets, state of development, visual and functional qualities of the place, and visual qualities of the surroundings.

The accessibility of both Wisława Szymborska Park and the green space at Axentowicza Square was evaluated. In the immediate vicinity, there are public transport stops, parking spaces for cars, and access routes. Furthermore, the Wisława Szymborska Park is equipped with bicycle racks located in front of the entrance gate on Karmelicka Street.

The parks have been designed in such a way that people with mobility impairments are able to access and enjoy them without encountering any barriers. The Wisława Szymborska Park is distinguished by the presence of a green square situated on a raised platform. The remainder of the park is accessible at ground level. A significantly more extensive range of services is available in the vicinity of Wisława Szymborska Park, a phenomenon attributable to the immediate surroundings of the park and the specific nature of Karmelicka Street. However, a notable exception is an ice cream parlor on Axentowicza Square, which has gained a reputation among users of the park and its surroundings.

The development of Wisława Szymborska Park was given a slightly higher rating than the green space on Kazimierza Wielkiego Street. This phenomenon can be attributed to the sequential arrangement of the composition, the heterogeneity of the minor architectural components, and the incorporation of water elements. The site is distinguished by its abundant and diverse greenery, encompassing a wide range of species and dimensions. It also features modest architectural elements, such as seating and educational components, contributing to its aesthetic appeal and functionality.

In this respect, the surroundings of the green space at Axentowicza Square were rated slightly lower. The arrangement of the diminutive architectural components is also less aesthetically pleasing in this instance, despite their satisfactory condition. Nevertheless, the area is distinguished by its well-preserved and well-maintained greenery.

The visual assets of Wisława Szymborska Park include the diversity of greenery, well-preserved, wear-resistant flooring that does not dominate the space, footpaths proportionate to the greenery, the presence of water, and characteristic elements of small architecture, i.e.,

umbrellas, which are a distinctive feature of the park. The park's functional advantages are manifold. For instance, it is accessible to people with disabilities and families with prams, and it boasts many seats (benches). In addition, it is linked to neighboring facilities (such as the library), and it is accessible from two sides of the park. Furthermore, it has a water retention system, and the park's thematic compatibility with the neighboring library (the park's patron is a poet and Nobel Prize winner) ensures its educational value. This is further enhanced using development elements thematically related to the author's work, the proximity of Karmelicka Street (which is important on a city scale), and the use of characteristic elements of small architecture, such as umbrellas protecting against the sun and water channels conducive to hot days.

The visual appeal of Axentowicza Square is attributable to the presence of substantial greenery, which engenders an intimate atmosphere. The vegetation also serves a practical purpose; it functions as an insulator, thereby mitigating noise, purifying the atmosphere, and reducing the heat island effect. The location is distinguished by several salient advantages of a pragmatic nature. These include the presence of benches and other diminutive architectural elements, in addition to verdant features, sprinkler systems that are of particular utility during periods of high temperature, and the proximity of residential architecture.

Additionally, both Szymborska Park and the green space at Axentowicz Square are in close proximity to public transport stops and parking facilities, a factor that is likely to encourage utilization by individuals from outside the immediate community.

The visual advantages of the surroundings of Wisława Szymborska Park include the well-kept facades and surroundings of the library and the facades on the opposite side, including the presence of a characteristic mural with the text of a poem by W. Szymborska, which additionally refers to the theme of the place. However, the façades of some of the tenement houses visible from Karmelicka Street, located in the vicinity of the church, are in need of renovation. The adverse perception of the landscape elements is compounded by the presence of signs.

The positive aesthetic values of the green area on Kazimierza Wielkiego Street are attributable to the proximity of characteristic, well-preserved tenement houses and villa buildings. An important visual element is St. Stephen's Church, which closes the view. Negative aspects include neglected pavements in some areas and the presence of signs and advertisements in the shop windows of the tenement houses.

Conclusions

The historical surroundings, including 19th-century barracks, 19th- and 20th-century tenement houses, 20th-century villa housing, and the proximity of monastery buildings, significantly influence the identity and perception of both spaces. Collectively, these elements contribute to the distinctive character of each location, setting them apart from other green spaces within the urban landscape.

Wisława Szymborska Park exemplifies the effective rehabilitation of a degraded space for the benefit of local communities, aligning with visual, functional, and environmental criteria. The green space at Axentowicza Square is likewise a recreational area but meets the needs of users to a lesser extent due to its limited program.

It is important to note that the historical environment not only provides a contextual framework for both developments but also exerts a significant influence on their quality, attractiveness, and potential. The revitalization of Kraków's historic center demonstrates the viability of harmoniously integrating heritage conservation with contemporary eco-friendly solutions, thereby offering tangible benefits to both the local community and visitors [22].

The examples analyzed demonstrate a variety of approaches to renovation and revitalization. Wisława Szymborska Park is a cohesive, contemporary complex. The green space at Axentowicz Square constitutes a more traditional space, where the fundamental elements of the urban layout of the surrounding area have been preserved since the early 20th

century. The results of the study may be useful in design practice. It is asserted that the successful revitalization or modernization of historical fabric hinges upon a respect for place-based identity and history, as well as the needs of the community. It is imperative that these activities encompass both contemporary design challenges and prevailing trends, incorporating environmentally sustainable solutions.

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