

## Designs of tourist routes leading through Krakow urban green areas as examples of tourism development and showcasing of the cultural heritage – didactics, practice

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### Summary

Krakow is one of Poland's most important cultural heritage treasures, but many tourists only visit the city's iconic and world-famous monuments. Far fewer people take a walk around the entire Old Town, visit the former suburbs of Krakow, not to mention the parts further afield. The reason for this can be attributed, among other things, to an insufficient number of marked tourist routes that would, on the one hand, encourage people to visit these areas and, on the other hand, be a motivating factor for better exposition of valuable landscape forms. Such measures are already becoming increasingly popular in Poland, also in rural areas, where newly designed tourist routes serve to exhibit even the smallest forms of cultural heritage and encourage tourists to visit a given region. This paper presents student designs of tourist routes running along the northern and southern sides of Krakow's Old Town, together with the result of the pre-design research on which they were based. From a didactic point of view, they provided an opportunity to sensitise future landscape architects to the beauty and necessity of protecting and displaying Poland's cultural heritage, both within and outside historic cities. When made available to the public, these routes can encourage people to visit more places of interest in and around the old town of Krakow, with a particular attention to the various forms of urban greenery, as well as their better exhibition and, in turn, the revalorisation of non-existent or forgotten landscape elements.

**Keywords**

landscape design • planning • cultural heritage • Galicia • historical geodesy hGIS • tourism

**1. Aim, methods and subject matter**

This article aims to broaden the discussion on the methodology of plotting tourist routes in and around cities as a way to develop tourism and heritage exposition. It presents one possible approach to pre-design work, research and analysis for the designation of a tourist route showcasing a city's cultural heritage. As an example of the realisation of this objective, the article presents two route projects, which are both the fulfilment of the above theoretical assumptions and projects that are feasible/accessible to the public.

This paper describes the process of designing two tourist routes: on the southern and northern side of Krakow's Old Town, leading through the most beautiful areas of urban greenery. The usefulness of archival maps for contemporary landscape research was taken into account, and the frequently used research methodology in contemporary landscape design with valuable elements of cultural heritage [Przegon et al. 2017, Kowalska 2013, Zachariasz 2002] was applied. The results of pre-design research based on the following methods are presented: analysis, comparative synthesis, historical comparisons and in situ surveys. The research ranged from analyses of the Galician cadastre and three historical Austrian military surveys through their comparisons with contemporary maps, to in situ surveys of the entire area through which the tourist route could potentially be run. On the basis of such an overview – showing the development of Krakow and its individual monuments, including those that do not exist today or are not displayed – the most important elements of cultural heritage and the most interesting contemporary landscape forms that could potentially be located along the designed route were determined. The results of the research and the project were presented on geodetic maps, mainly historical topographic photographs, the Galician cadastre and orthophotos. In the delineation of the routes, the methodology and experience in the delineation of different types of hiking trails (mountain and lowland), tourist paths and passage/walking routes during marathons were taken into account [Baster 2020].

The paper uses projects made by the co-authors of this article – students of the Master's degree course in Landscape Architecture (conducted at the University of Agriculture in Krakow) as part of the course 'Landscape Design – Planning', under the supervision of Dr. arch. Przemysław Baster. Each project consists of two B1 design boards; Figures 2–4 are excerpts from these boards. Thus, this paper also describes an example of the methodology for design subjects in the Landscape Architecture degree programme and the learning objectives that can be achieved as a result of landscape design on a planning scale.

## **2. Results and discussion**

### **2.1. Krakow's tourist trails and routes**

When walking through Krakow's Old Town and its surroundings, it takes a long time to find distinctive markings of trails or even tourist routes. This is somewhat of a paradox – a city that was for several centuries the capital of Poland, with hundreds of historical monuments, has only a few designated trails and tourist routes, while its – broadly defined – environs are characterised by a rich network of such routes (for walking, cycling and even horse-riding), showcasing the undoubted beauty of the landscape and the wealth of cultural heritage of the region [Grabowski 2007]. The routes presented in guidebooks and information books try to satisfy this shortcoming. However, these are usually relatively short, and their description – sometimes very precise – concerns single monuments [Rożek 2005, Jakubowski et al. 2013].

### **2.2. Route design – basic guidelines**

These tourist routes, designed by the students, begin and end at places that in the 18th century belonged still to the countryside outside the city. Therefore, they take into account the whole range of monuments of different eras, styles and trends, and present to the visitor the diverse forms of the landscape of the city and its surroundings (Fig. 1). These starting and ending points were chosen not by chance, taking their inspiration from, among other things, the principles of marking out analogous points on hiking trails. On both routes, one of the end points was located on an existing tourist route (north – Łobzów Gardens, on the path along Młynówka Królewska; south – Kościuszkó Mound, on the path to the Zoo and Piłsudski Mound), and the other at an important, frequented transport junction (north – Jagiellonian University Botanical Garden, near the Central Bus and Railway Stations; south – Krakus Mound, near the Krakow-Podgórze station and bus stops). The intermediate point in both cases was the Old Town (its northern and southern parts), so that the various green areas within and adjacent to it could be showcased [Bogdanowski (ed.) 1997].

For both didactic and practical reasons, historical maps containing information on the cultural heritage of the discussed region were analysed [Zachariasz 2002]. Three Austrian military surveys and a Galician cadastre provided valuable information [Baster 2022]. Thanks mainly to their analysis and comparison, the delineated routes include not a few, but dozens of the most important monuments located on the route between the starting and ending points. This result of the study should interest tourists who are not keen on a detailed analysis of the visited sites, but are curious about what they see walking along a given route.

### **2.3. Analyses of the Galician cadastre**

While topographic images – especially the second and third – are still mainly known to a narrow group of specialists, the Galician cadastre is now a widely recognised

surveying work used in landscape design. Executed in the mid-19th century, it was an extremely accurate surveying work serving mainly taxation purposes [Nowak 2020, Wolski 2000, Rumpler et al. 2015]. It presented the subdivision of plots of land, accurately showing their development, numbering and precise boundaries – in contrast to the military surveys discussed above, which focused on information about land use forms useful for military operations.



Sources: mapire.eu

**Fig. 1.** Beginning and end points of designed tourist routes in the 18th century, marked on the first Austrian military topographic photograph: northern route (top) – Łobzów Garden (then existing) and Botanical Garden (then non-existent); southern route (bottom) – Krakus Mound (then existing) and Kościuszko's Mound (then non-existent) on St Bronisława Hill

It was impossible, in the case of the Galician cadastre – which was taken at the original scale of 1:2,880 – to analyse the entire area over which a hiking trail could be drawn (such a comprehensive analysis was therefore carried out on three Austrian military topographic photographs and an orthophotomap). However, it is worth pointing out that even in professional practice it can also be extremely difficult, if not impossible, to analyse an entire area (which can be many kilometres long) of a Galician cadastre.





Sources: Galician cadastre – National Archive in Krakow; first, second and third military surveys – mapire.eu

**Fig. 2.** Analyses of historical maps in the design of the northern tourist route 'Łobzów Garden – Botanical Garden' (from the top): the Galician cadastre (a) and the first (b), second (c) and third (d) military surveys; a fragment of the design plan

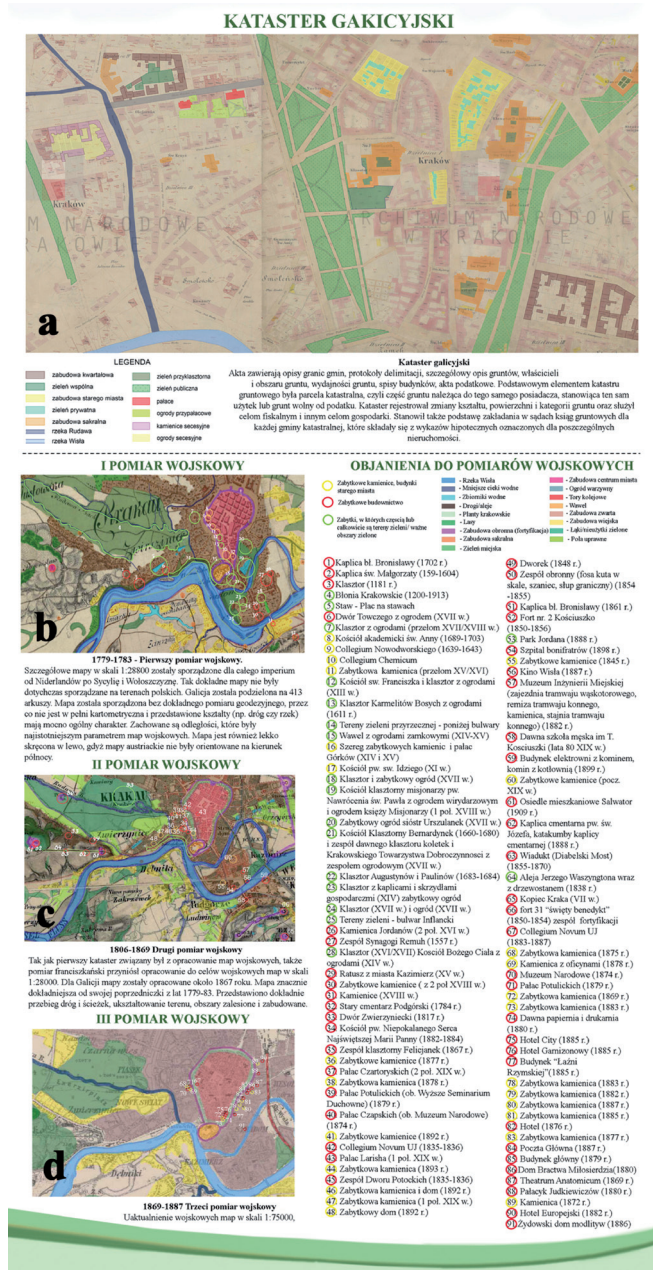
This would involve collating hundreds of fragments of the cadastre and many hours of preparation, which is difficult to imagine in the reality of today's Poland. This is also where the great advantage of topographic photographs should be regarded – they show a comprehensive view of an area occupied by tens or even hundreds of cadastre fragments, many of which have not survived to our times.

In view of the above, at the beginning of the design work, the section of the cadastre that shows the greatest diversity of greenery forms – a section of the Old Town and its surroundings – was selected for didactic purposes. For both routes, the analysis confirmed the great diversity of greenery types within the Planty and its immediate vicinity. In addition to the Planty, the gardens of individual tenement houses in the Old Town, gardens at palaces, quarter greenery, monastery gardens, alleys, avenues and squares were listed (Fig. 2a, 3a).

#### 2.4. Analysis of Austrian military topographic images

The oldest document and at the same time the first comprehensive cartographic representation of Galicia is the Map of the Kingdom of Galicia and Lodomeria prepared at a scale of 1:28,800 in 1779–1783 (Fig. 2b, 3b). In the literature it is most often referred to as the Mieg Map, as the work in this area was led by Colonel Friedrich von Mieg [Petryszyn 2006]. This large study is only a small part of the Joseph Map – the first Austrian military survey – which covered half of Europe [Rajšp (ed.) 2000]. This map was mainly focused on military purposes, so it presents terrain information, at the time important for military operations, but now for landscape purposes. Although it was created at the end of the 18th century, many of the depicted townscape forms already existed in medieval times. As part of the project, landscape forms that no longer exist today were identified first: the ramparts, the foreground of the ramparts, the old riverbed of the Vistula, the wide floodplains of the Rudawa river, the middle and final section of the Młynówka – a stream flowing on the ground surface. Attention was then drawn to forms that are illegible in the present space or have been heavily altered: the surroundings of the Łobzów palace and garden, the avenues leading to it from the centre, as well as the building layouts: along the roads leading to this garden of Krakow from Stradom and Kazimierz. As a result of this analysis, more than fifty valuable landscape elements were delineated along both routes, about half of which related to various forms of urban greenery.

Next analysed was the second military survey of the Habsburg Empire, the Franziszeische Landesaufnahme (Fig. 2c, 3c). It includes maps of individual geographic regions created between 1806 and 1869, also at a scale of 1:28,800, however the Polish lands of the Austrian partition – located in the area of Galicia and Bukovina – were developed quite late, in the years 1861–1864. For contemporary Polish landscape design, though, this has the advantage that the maps depict the situation of Polish lands already after the political and social turmoil of the mid-19th century that resulted in changes in the landscape. Therefore, this study – which excellently illustrates various forms of greenery – is essential for contemporary research and landscape design. It is particularly



Sources: Galician cadastre – National Archive in Krakow; first, second and third topographic image – mapire.eu

**Fig. 3.** Analyses of historical maps in the southern tourist route project 'Krakus Mound – Kościuszko Mound' (from the top): the Galician cadastre (a) and the first (b), second (c) and third (d) military survey a fragment of the project board. Labels: green circles – urban greenery; red circles – architectural forms



evident from the in-depth analysis of the area in Krakow where the southern route is to run, as it is characterised by a great variety of greenery.

The most recent, the third, topographic image of Galicia was produced only about twenty years after the previous one. Such a small time gap means that the spatial development on both maps is very similar in many locations. In the case of Krakow, some differences do exist, but they are not as significant as in the case of the changes that occurred between the production of the first and second topographic images (Fig. 2d, 3d).

## 2.5. Design of tourist routes – didactics, practice

The combination of such historical analyses with many hours of in-situ research allowed the delineation of tourist routes passing through the vast majority of the listed historic landscape elements – urban greenery, buildings, fortifications [Pawlicki et al. 2002, Kosiński 2002]. Contemporary features localised either during field surveys or on the orthophotomap (based on collected literature) were also taken into account. Where the route passed through non-existent or heavily altered landscape elements, a decision was made within the design guidelines to either restore them to their original form, or whether this was not possible/advisable in modern realities (Fig. 4a, 4b).



Source (orthophotomap): [geoportal.gov.pl](http://geoportal.gov.pl). (top)

**Fig. 4a.** Design of the route of the northern tourist route 'Łobzów Garden – Botanical Garden'; fragment of the design plan. The most important exhibited forms of urban greenery: the riparian greenery by the former watercourse of the Młynówka Królewska (3), St. Wincenty a'Paulo Park (7), the greenery of the quarter buildings in Chocimska Street (8), Kijowska Avenue (10), Młynówka Park (12), squares and 'pocket' gardens in the vicinity of Trzech Wieszczów avenues and Łobzowska Street (14), Krakowski Park (15), the newly created W. Szyborska Park, the new promenade on Krupnicza Street, Planty Park (20), gardens of tenement houses and monasteries of the Old Town (21–28), garden areas of palaces on Kopernik and Lubicz streets (31–34), Botanical Garden (39)





Source (orthophotomap): geoportal.gov.pl. (bottom)

**Fig. 4b.** Design of the route of the southern tourist route 'Krakus Mound – Kościuszko's Mound'; fragment of the design plan. The most important exhibited forms of urban greenery: Krakus Mound (1), the greenery of the historic Podgórze cemetery (2), the greenery of the abandoned Liban quarry (3), the greenery near fort no. 31 (6), Bednarski Park (11), the Vistula Boulevards (40, 42) near Wawel Castle (45), the Planty and gardens near the tenements and the Old Town monastery (51–59), 'pocket' garden at Collegium Novum (60), greenery at the end of Młynówka Królewska near Art Nouveau tenements (70), Jordan Park (84), Błonia (85), Washington chestnut avenue (94) leading to Kościuszko Mound (95)

Both trail projects were primarily designed to showcase the various forms of urban greenery in Krakow, although famous architectural monuments were not shunned. The northern route leads from the Łobzów garden along the former riverbed of the Młynówka Królewska and the accompanying riparian greenery, through the St. Wincenty a'Paulo Park, the greenery of the quarter buildings in Chocimska Street, along the front gardens of the tenement houses in Spokojna Street, along Kijowska Avenue to return to the Młynówka Park. The route continues through squares and 'pocket' gardens in the vicinity of the Three Wieszców avenues and Łobzowska Street, and then leads visitors to Krakowski Park and the newly created W. Szymborska Park, and finally via a new promenade leads them to the Old Town through the former Szewska Gate. After a short walk around the Krakow Planty, the route shows examples of small gardens at the back of the Old Town houses and fragments of greenery at the palaces built outside the Planty. The walk ends in the Botanical Garden, having previously passed through the gardens of the palaces located on Kopernika Street.

The second of the discussed trails begins at the Krakus Mound, although access has also been provided from the large Krakow-Podgórze transportation hub to connect as many visitors as possible. From the mound, the route leads toward the historic Podgórze Cemetery, the disused Liban Quarry, Fort No. 31 with its surrounding greenery, and then guides visitors to Bednarski Park. Further along, the trail passes through Podgórze Market Square and the Bernatka Footbridge over Vistula leading to the most beautiful architectural monuments of Kazimierz. Next, it takes visitors along the Vistula Boulevards beneath Wawel Castle to the start of the Royal Route (a path stretching from the Barbican to the Wawel Royal Castle via Floriańska Street, the Main Square, and Grodzka Street), through the Planty Park and gardens near the Old Town tenement houses, from where it leads to a 'pocket' garden at Collegium Novum and a viewpoint of the Kościuszko Mound. Later, the trail passes by monasteries and palaces located near Marshal Józef Piłsudski Avenue, allowing visitors to see the greenery at the end of Młynówka Królewska stream, the squares along the Trzech Wieszców avenues, and reaching Jordan Park (the first Jordan-style park in Poland) and the famous Krakow Błonia meadows, renowned across Europe. The final segment of the trail passes through Salwator and a magnificent chestnut avenue, leading to the Kościuszko Mound.

It should be emphasised that the tourist routes designed in this way undeniably highlight the various forms of urban greenery in Krakow.

When considering the designed routes in practical terms, it should be noted that they would not necessarily have to be marked out directly in the field, according to the rules for signposting mountain or lowland hiking trails. With today's technology and surveying capacities, the designed routes could be available in electronic form. This can be achieved with, among other things, the software used to organise marathons, in which the organiser provides participants with a map with the route drawn on an app, and participants have to follow the route on the ground. Such a system has its additional advantages, enabling a section of the route to be crossed by a different route and to be easily navigated at night.

### 3. Summary

The realised designs showcased a variety of forms and, as a result, potentially attracted the greatest tourist interest in the surrounding landscape. This was achieved through a number of general guidelines, the simultaneous implementation of which allowed the beauty of the cultural heritage of Krakow and its surroundings – especially the urban greenery – to be exposed, even if it was forgotten or now no longer visible:

1. The beginning and end of the route are located well outside of Krakow's Old Town, next to prominent historical landscape forms, providing tourists with the opportunity to reach these places either via other tourist routes or by different means of transport. This length of the route allows the greatest possible variety of landscape forms to be exposed.
2. The routes were planned on the assumption that they should first of all pass through various forms of urban greenery. This way the following were exposed: historic palace gardens, historic city parks, the area of the Młynówka stream and its banks, the Planty park, the Błonia park, the Wolski Forest, domestic gardens in the Old Town, quarter greenery, avenues, rows, squares.
3. Information derived through the analysis of several historical maps was used; the results of such analysis – using the method of historical comparisons – were contrasted with a contemporary orthophoto, thus achieving a compilation of information on historical and contemporary landscape forms worthy of exposure on the designed tourist routes.
4. The routes were designed to be not the shortest, but the most interesting; this allowed the vast majority of the discovered and valuable landscape forms to be exhibited.
5. It was understood that even when tourist routes were being created through some of the most beautiful green areas in Krakow – and thus creating nature trails – attention should also be paid to architectural monuments; hence historical and cultural routes were designed at the same time.
6. The design guidelines include the recreation of forms of urban greenery that no longer exist, but whose restoration is possible under current conditions (mainly avenues and rows).

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