

# The Origin, Further Transformations, and Present-Day Importance of Krakow's Fringe Belts Resulting from the Liquidation of the Fortress Krakow

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**Abstract:** Based on four key decisions, the history of Krakow urban form can be divided into five periods: 1. the organic agglomeration of settlements focused around Wawel Castle-and-Cathedral Hill; 2. the gridiron plan of walled city, initiated by the 1257 Cracovia charter; 3. the longitudinal complex of Clepardia, Cracovia, Casimiria, and Podgorze charter towns, continued from 1320s till early 1800s; 4. the concentric and radial form of the 1850s fortress complex, consisting of three consecutive rings of fortifications, continued with the 1910 plan of Greater Krakow; 5. the latitudinal development after the 1949 establishment of Nowa Huta large industrial town, east of historic Krakow.

In the article the urban fringe belts emerging in the latter part of the fourth period have been discussed. The liquidation of the Fortress Krakow in the 1910s gave way to the development of vast land, which the military had controlled. Despite losing their original importance, the former borderlines and edges have not disappeared completely from the city and its districts. The general ideas provided by the results of the 1910 competition for Great Krakow plan were combined with various factors, resulting in the considerable development of Krakow. Some of the new districts of the city, especially in its western part, became typical fringe belts dominated by public functions. The other districts, especially in the northwest and northeast parts, tended to be of exclusively residential character. Paradoxically, in some cases it was compensated later (in the fifth period) with the next fringe belts of mainly public functions.

## 1. Introduction

The article is an attempt to discuss part of the urban history of Krakow in the light of the planning history and the fringe belts idea.

Krakow, the second largest city of Poland and its historical capital for 600 years, still houses the greatest collection of historic urban forms and layouts in Poland. According to the author's research, five or even six periods of the on the urban history of Krakow can be distinguished, as based on the key urban decisions taken in the past. According to (Motak 2012, 2018) those stages are:

1. the early Medieval Stage 1 (9th century–1257) of an organic agglomeration of settlements centred around the Wawel Castle-and-Cathedral Hill;
2. the high Medieval Stage 2 (1257–1335), after the first regular, grid order of the walled city was introduced with the 1257 Cracovia Grand Charter;
3. the long-lasting Stage 3 (1335–1850) of the longitudinal complex of Clepardia (chartered in 1321 (Wyrozumski 2016) and rechartered in 1366), Cracovia, Casimiria (chartered in 1335) and Podgorze (chartered in 1784), continued from the 1320s till the early 1800s with the three next-to-Krakow charter towns stretched along the North–South path i.e. the main commercial tract;
4. the Stage 4 (1850–1949), its concentric & radial shape resulting from the military-conditioned and carefully planned noyau (the core) of the 1850 Fortress Krakow, which was subsequently expanded with consecutive rings of fortifications, and with the 1910 plans of Great Krakow were continued also after the liquidation of the fortress;
5. the latitudinal Stage 5 (1949–1988, or until now), mostly affected by the huge Nowa Huta project in the East – a metallurgical complex combined with a big new city, that soon became Krakow’s new district, which was responsible for the East-West direction of development;
6. it is difficult to decide whether nowadays there is a continuation of Stage 5 or the next;
7. stage 6 has already commenced. In the light of research the latter option seems to be slightly more probable. In that case the Stage 6 would have begun in 1988 with the master plan passed that year, which put an end to further growth of the city, insisting rather on its modernization. One can note that the shape of the city has recently tended to be concentric & radial again.

The paper is focused on the latter part of Stage 4, namely the results of the liquidation of the Fortress Krakow, which took place at the end of the First World War after the agreement on moving the fortification lines outwards had been reached in the early 1900s. It resulted in the removal of the civic construction restrictions that had been applied for decades, as well as in the vast areas being offered for the new plans of Great Krakow. A good use was made of the opportunity.

## 2. Methodology

The fringe belts, which is certainly one of the most important terms of urban morphology and urban studies in general, has been defined by the most prominent researchers. M. R. G. Conzen explains it is “A belt-like zone originating from the temporarily stationary or slowly advancing fringe of a town and composed of a characteristic mixture of land use units originally seeking peripheral location” (Conzen, 1969). Jeremy Whitehand and Nick Morton point to the fact it is “A zone of extensive urban land use that comes into being at the edge of an urban area during a period of outward growth. When residential growth resumes, the hiatus leaves a permanent mark in that the fringe belts becomes embedded in the urban area” (Whitehand, Morton, 2003). Therefore the most meaningful and widespread definitions of fringe belts focus, among other notions, on three aspects: the origin (which is often linked to economic stagnation), the location (which was usually peripheral), and the functional character (which tended to be dominated by mixed land-use). The early study by Herbert Louis mentioned also the importance of fortifications to its origin (Louis, 1936). Since the author of the paper has researched the urban

history of Krakow (which was of course researched by many other scholars) in general and in some of its particular subjects, he has noticed the chance to consider it also from the fringe-belt perspective. Although it may be not the most classical example, it hopefully bears enough resemblance to justify that attempt.

### 3. Analysis/Results

The Austrian fortress of Krakow was built, enlarged and modernised from 1850 till 1916, to become one of the biggest fortresses in Europe (Bogdanowski, 1979). It was a vast system of fortifications with three rings of defense surrounding the city, dozens of forts and shelters, 110 kilometres of military roads, 93 bridges and entire complexes of masking greenery (Suchon, 2014). The defense system generally consisted of the *noyau* (the first, innermost and continuous ring of fortifications) and two more outer “rings” of separate, scattered forts, which were linked with the core and one with another by, respectively, radial roads and rocade roads. The perimeters and average radiuses of the outer rings weres much larger than those of the *noyau*. Numerous buildings and complexes that were necessary for the existence of the fortress were built mostly in the city i.e. within the first ring of defense or nearby; there were army barracks, administrative offices, hospitals, food plants (bakeries, tinned food plant), storage buildings. The military airport with its runways and hangars was laid out east of the city to be used by hot-air-balloons since 1882 and airplanes since 1912.

With time, in the second part of the 19<sup>th</sup> century the city proper within the *noyau* i.e. the fortifications' first line tended to be built-up so densely that the number of available building lots was much reduced, while the chances to build outside the fortifications were highly limited or, in some areas, entirely excluded due to the military restrictions. Although Krakow was a relatively small town in terms of area and population, its population density in Krakow was the highest in the entire Austrian-Hungarian monarchy, exceeding those of Vienna, Lviv and other cities that were much larger than Krakow.

After the fortress went out of use in 1918, some of the forts were pulled down, especially in the 1950s, however most of the forts have survived till the present, though they deteriorated with time – despite being listed now. Some of the forts, actually only a minority, have been adapted for various functions, usually public or commercial ones, to become e.g. a horse stud, an astronomical observatory, a local cultural centre or a hotel.

Most of the numerous accompanying buildings of the fortress – army barracks, offices, hospitals – have also been successfully adapted. For example, two complexes of the military barracks were converted to be the academic buildings of the Cracow University of Technology and a large public library.

The airport shared civil and military use from 1923. It was closed only in 1963, when it was already in the centre of the city rather than on the eastern edge, and relocated behind the western city limits. Its original area has been partly built-up by now, mostly with housing projects, though some runways were preserved and occasionally are used for recreation and cultural events (“air picnics” or reenactment activity), while the Museum of Aviation was opened in the historic hangars and the new 2010-completed building.

The restrictions, which in the second half of the 19<sup>th</sup> century and early 20<sup>th</sup> century, limited or even prohibited for decades building in a lot of areas surrounding the *noyau* and the city, resulted in a characteristic urban scheme of a strong division between the inner and outer space, which might be regarded as 1900 equivalent of the Medieval *intra muros/extra muros* distinction.

In 1912 that urban scheme undoubtedly helped Ebenezer Howard call Krakow “a garden city from a natural growth” or “a garden city naturally developed”. The precise message of his kind remark, which was often quoted since, might have been slightly distorted as Howard’s public lecture was delivered in Esperanto language (the main purpose of his visit was the 8<sup>th</sup> World Esperanto Congress held in Krakow), which was simultaneously interpreted into Polish to be published in the local daily next day.

During his 1912 visit in Krakow Howard had a busy time: apart from Esperanto congress activities he dealt with planning, too. He delivered the lecture on garden city idea and movement for c. 1,000 people, visited and learnt about the various sites and districts of the city (for instance the large exhibition of architecture and interiors in the garden surroundings) and also met with a group of Krakow architects, including the authors of the 1910 plan of Great Krakow (K. Czajkowski, W. Ekielski, T. Stryjenski, L. Wojtyczko, K. Wyczynski). Having been provided with the information on the plan of Great Krakow, he issued some comments on the plan and the general concepts of Krakow development, e.g. pinpointing some particular locations for particular functions and land use (Czyzewski, 2009). The plan of Great Krakow, which covered the newly-acquired areas, followed the 1910 enlargement of Krakow with the surrounding suburbs and villages, which was in turn permitted by the effects of the negotiations between the Krakow local self-government and the Austrian-Hungarian army: the army decided to set the new line of defense further from the centre so the *noyau* was abandoned giving way to the substantial enlargement of Krakow. Then, as a result of the WWI and the Independence of Poland, the entire fortress was all but gone soon, though as mentioned before, most of the larger forts were spared and are now part of Krakow heritage. At the time, however, it offered a lot of land to be developed as most of the new districts (except for the town of Podgórze that was incorporated only in 1915) were either scarcely built-up or not built-up at all.

The limitation and then liquidation of the fortress as well as the plans of Great Krakow were crucial for the further development of Krakow – in various functional aspects. Three particular cases or rather types of land use can be discussed:

- the public/official edifices,
- the residential quarters and neighbourhoods,
- the health service.

The process of new development of post-military areas—being the Krakow fringe belts—took place mostly in the first half of the 20<sup>th</sup> century, both before and after Poland regained her independence in 1918. The trends were dominant especially in the second and third decades of the century, when numerous local regulation plans were introduced. The trends continued with the master plan of Krakow that was evaluated in the late 1930s and, to a lesser extent, even after the World War II.

Both public edifices and residential quarters can be best discussed with the area of the former railway line originally placed atop and along the entire western part of *noyau*. The railway and the earthwork were demolished in 1912 to be replaced with the 52-metre wide artery: the Alley of Three Poets (the Polish poets of Romantic era). The elongated, slightly curved or broken, space of the Alley of Three Poets was lined with elegant residential 5- or 6-floor row houses, which were individual undertakings, and also with some prestigious projects of impressive public edifices. Those public edifices, such as Academy of Mining (by S. Odrzywolski, 1919–1930), Jagiellonian Library (by W. Krzyzanowski, 1931–1939) and National Museum (by C. Boratynski, E. Kreisler, B. Szmidt, 1934–1939), stood out of the majority of new urban tissue, which was constructed mostly of residential quarters planned in a traditional way though with upgraded

standards, too (e.g. permitting no back buildings resulted in larger yards shared visually by the neighbours). Stylistically, most buildings were Modernist, though not Avantguard, many with references to historic architecture. Although officially never declared as such, the Alley of Three Poets was clearly an attempt to shape the city's new compositional backbone.

It was the residential projects and neighbourhoods that were most needed to be developed in the scale of the entire city. The post-fortress structure provided quite a lot of sites for development, both directly (as it offered land in the proximity of the city to be built-up) and indirectly (by covering it with the municipal planning regulations instead of the military restrictions). Apart from the numerous quarters of tenant houses some entire new neighbourhoods were built – the largest of which was a complex of the mid-1920s Officer and Official housing projects in the NorthEast district, for the most part planned by Marian Lenk (Motak, 2018).

The regulation plans of the Officer and Official housing projects, commissioned by the officer and official cooperatives, were precise though nicely composed. By far they were the largest Interwar Period projects in Krakow: they consisted of c. 600 lots, including the detached housing, semi-detached housing, and a few blocks of flats. About 300 lots have been built-up by 1939.

Apart from the public/official and residential land use there were more spatial solutions, for instance hospitals and parks (The Krakowski Park was laid out just next to the Alley of Three Poets), and there was one special project that combined both. It also definitely stands out amidst Krakow and the whole country health service projects: the psychiatric hospital complex in the area of then the village of Kobierzyn, just next to another line of fortifications and the South city limit of Krakow after it was extended. It was built in 1907-1917, planned and designed by architect Wladyslaw Klimczak. The complex consists of a number of pavilions arranged within both natural and planned greenery, while some specialised buildings were intended to help cure the patients through their activities, both physical (in workshops or a bakery) and mental (in the theatre or a chapel). Regarding its urban and architectural form, on one hand it might be associated with the Garden City idea, on the other hand it exemplifies Art Nouveau and early Modernism. It still retains its original function.

#### 4. Discussion/Conclusion

The Krakow areas that were freed from urban and mostly military restrictions in the early 20th century seem to meet most of the requirements to be considered Krakow fringe belts. Some of those areas were very carefully assessed and planned in the 1920s and the 1930s. That was certainly an important reason why they, despite the deeply changed direction of the city's development in the further decades, continued to offer some opportunity to particular important projects for a very long time.

A reliable and relatively recent proof of the original plan's quality and flexibility are the projects that only date back to the late 20<sup>th</sup> century. There are two outstanding examples of the projects which were successfully introduced in the 1990s into the urban tissue of the Alley of Three Poets' compositional axis and the Officer Neighbourhood. They are, respectively, the Krakow Radio Station (built in 1997–1999, designed by T. Mankowski and P. Wrobel), of semicircular, inclined volume and the multifunctional complex of The Church of Lord's Mercy (built in 1991–1994, designed by S. Niemczyk). Apart from the very architectural values, their volumes helped improve and complete the locally key compositional spaces – the important street corner and the local district square – that had been in urban terms originally planned nearly a century before.

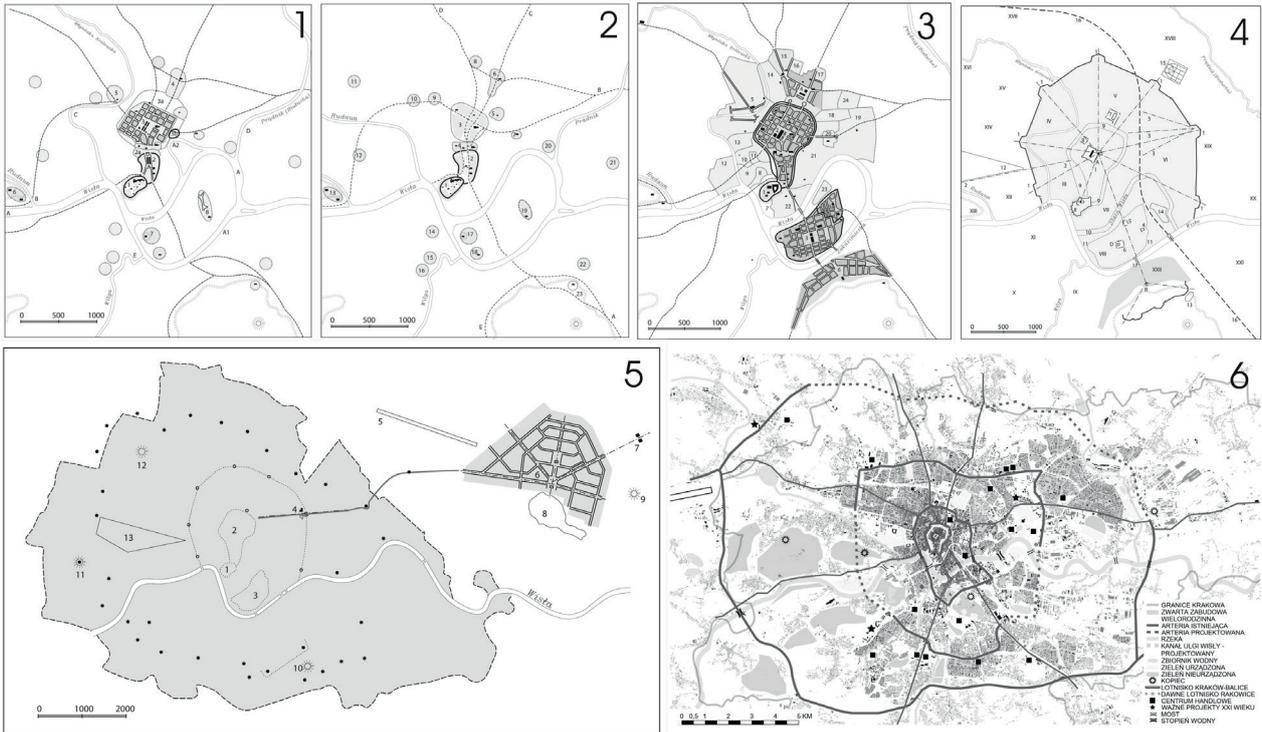


Figure 1. Six stages of the urban development of Krakow: 1 – the organic layout of settlements (9th century–1257). 2 – the gridiron order of the Grand Charter (1257–1335). 3 – the North–South line of development of successive charter towns (1335–1850). 4 – the radial-concentric shape of the Fortress Krakow (1850–1949). 5 – the East–West direction of development with Nowa Huta (1949–1988). 6. the recent development with radial-concentric tendencies (since 1988). Drawings by Ewa Szymczyk, Maciej Motak, Magdalena Wozniczka.

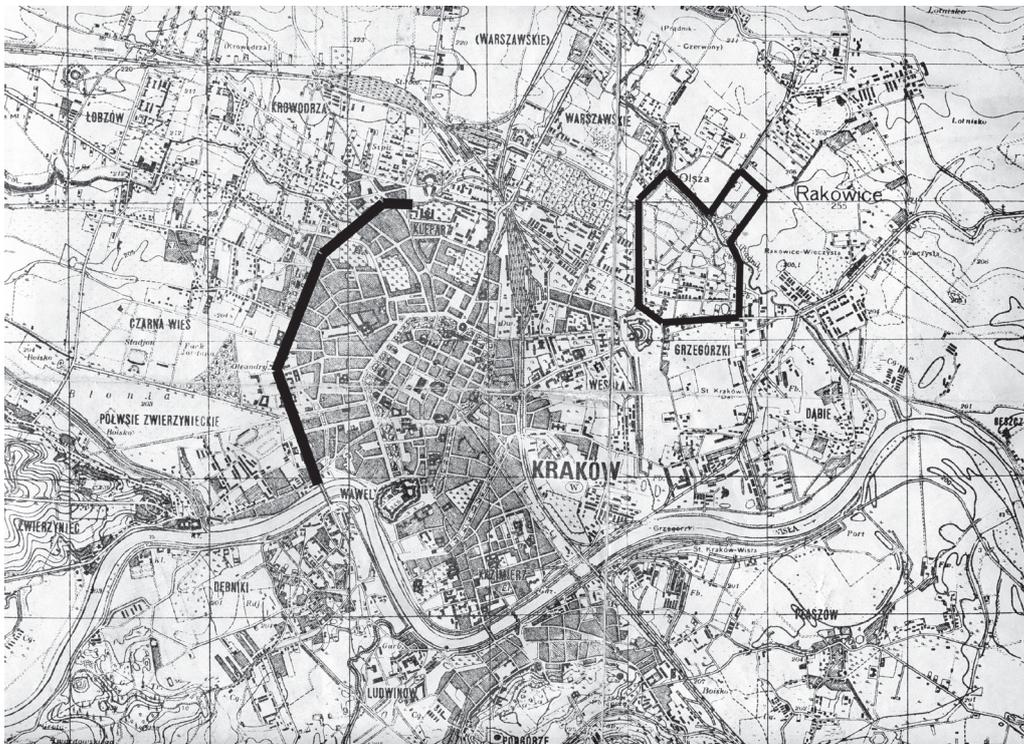


Figure 2. The 1934 map of Krakow (the map's author is unknown). Maciej Motak archive. The Alley of Three Poets (compare Fig. 3) and the area of the Officer and Official Neighbourhoods (compare Fig. 4) are marked, West and East of the Old City, respectively, by the paper's author.

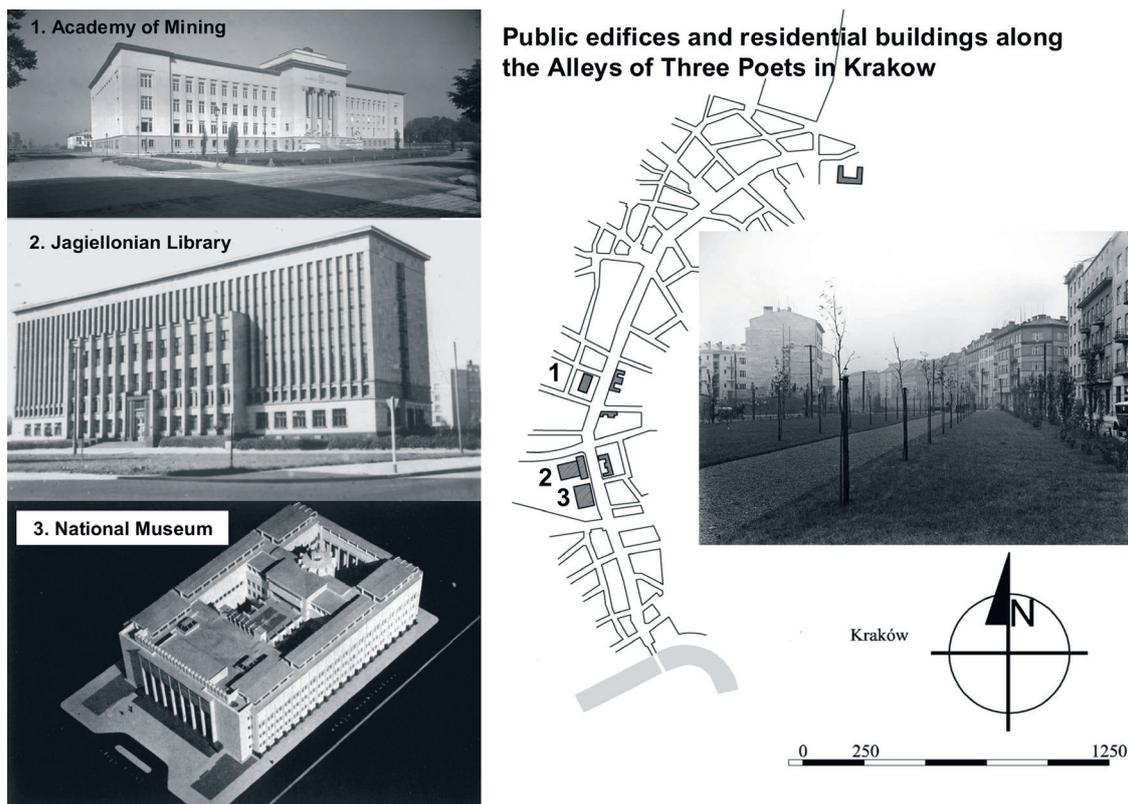


Figure 3. The Alley of Three Poets scheme plan and the 1930s photographs of three public edifices (left) and residential buildings (right). Drawing by Maciej Kapolka, photographs from the National Digital Archives and Maciej Motak archive.

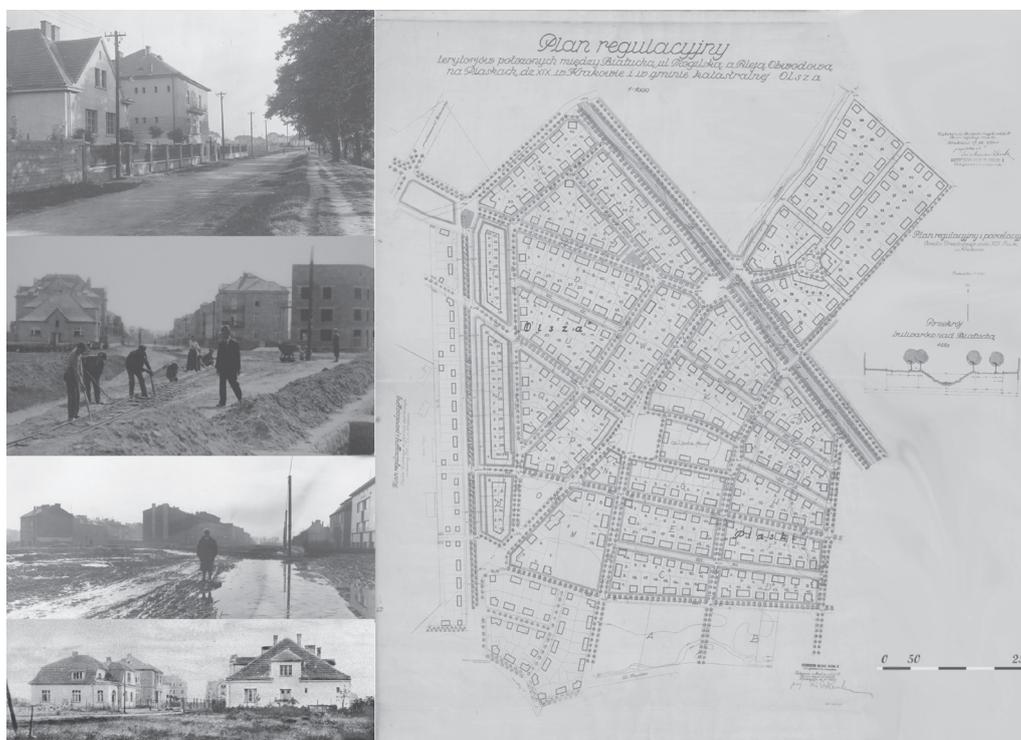


Figure 4. The compilation of the Officer and Official Neighbourhoods 1924–1926 regulation plans by Marian Lenk, and the 1930s photographs of the neighbourhoods being built-up. Plans from the National Archives in Krakow, compiled by Maciej Kapolka. Photographs from the National Digital Archives and Anna Medwecka-Kornas archive.

## References

- Bogdanowski J. (1979), *Warownie i zielen Twierdzy Krakow*, Wydawnictwo Literackie, Krakow.
- Conzen M.P. (2009), *How cities internalize their former urban fringes: a cross-cultural comparison*, in *Urban morphology*, 13.1, pp. 29-53.
- Conzen M.R.G. (1969), *Alnwick, Northumberland: a study in town-plan analysis*, Institute of British Geographers Publication 27, George Philip, London.
- Czyzewski A. (2009), *Trzewia Lewiatana. Miasta ogrody i narodziny przedmieścia kulturalnego*, Państwowe Muzeum Etnograficzne, Warszawa.
- Louis H. (1936), *Die geographische Gliederung von Gross-Berlin*, Engelhorn, Berlin.
- Motak M. (2016), *Ebenezer Howard's Ideas in relation to the Planning of Krakow: A short history*, in Heim C. (ed.), *History – Urbanism – Resilience*, vol. 2, The Urban Fabric (International Planning History Society Proceedings, 17th IPHS Conference, Delft), pp. 237-250.
- Motak M. (2018), *Osiedle Urzednicze w Krakowie. Urbanistyka i architektura 1924-1942*, Wydawnictwo Politechniki Krakowskiej, Krakow.
- Motak M. (2018), *Outline of the history of the urban development of Krakow*, Wydawnictwo Politechniki Krakowskiej, Krakow.
- Suchoń F. (2014), *20th century fortress gates in Kraków as spatial marks of the city limits*, in Jelenski T., Juchnowicz S., Wozniak-Szpakiewicz E. (eds), *Tradition and heritage in the contemporary image of the city*, monograph, vol. 3, Practise and process, Krakow.
- Whitehand J. (1988), *Urban fringe belt: development of an idea*, *Planning Perspectives* 3, pp. 47-58.
- Whitehand J., Morton N. (2003), *Fringe-belts and the recycling of urban land: an academic concept and planning practice*, in *Environ Plan B Plan Des*, 30(60), pp. 819-840.
- Wyrozumski J. (2016), *Początki Kleparza*, in Radwan A. (ed.), *Miasto bez murów. W 650 rocznice lokacji Kleparza 1366-2016*, Muzeum Historyczne Miasta Krakowa, Krakow.