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Society of Workers' Housing Estates and its attempt to overcome the residential crisis in interwar Poland. A contribution to further research

Jakub Frejtag

Department of 19th Century History; Faculty of History; University of Warsaw; Krakowskie Przedmieście 26/28, 00-927 Warsaw, Poland; jakub.frejtag@gmail.com 0000-0001-5083-9611

Abstract: After the Great War, one of the most challenging obstacles of the newly recreated Polish state was to ensure residential space for the group of citizens most vulnerable to exclusion. Labourers indeed required an inexpensive and modest habitations maintaining modern sanitary standards. Such facilities were underrepresented in Poland at that time. Mostly overpriced and unsanitary flats were offered in 19th-century housing. Also new housing, although with all modern amenities, did not provide flats with parameters that could meet the expectations of the least wealthy of labourers. In such circumstances, at the end of 1934, a new state-owned company was created – the Society of Workers' Housing Estate (*Towarzystwo Osiedli Robotniczych*). Its aim was to build and grant loans for the construction of residential areas with flats meeting the needs of the lower-class labourers. Despite the difficulties, up to 1939, thousands of new flats were built under the Society's initiative. All these investments exemplify a successful and far-reaching social policy of Second Polish Republic that made residential crisis manageable.

Keywords: Housing estates, housing policy, labourers

1. Introduction

As a result of the First World War, Poland has regained its independence after more than century of non-existence. The recreated country, thus far having been part of three states, completely differed in terms of politics, society and economics, faced many organisational obstacles. One of the most important and challenging problems was to ensure civilized, residential space for all its citizens, especially for groups particularly exposed to residential exclusion such as the most indigent rank of labouring class, where accommodation shortage took most flagrant form. It was manifested mainly in living conditions, which did not comply

with hygienic standards and were truly violating the human dignity. It should also be noticed that, despite the then standards were not too excessive and were limited to providing the suitable amount of light and fresh air, it was hard to find buildings available for labourers, which could ensure such conveniences, not to mention about access to waterworks, sewerage and electricity. After all, the tenement house, which was a type of settlement that dominated the urban landscape in the end of 19th and in the beginning of 20th century, was criticised by most architects of the time, who were actively participating in transposition of the innovative, foreign architectural and urban solutions to Poland [1, pp. 60-61], [2, pp. 88-91].

2. The origins of workers' social housing in interwar Poland

Therefore, the issue of labouring class living conditions became one of the most important social problems faced by the newly created state. As far as in 1919, the parliament established the State Housing Fund (*Państwowy Fundusz Mieszkaniowy*), and by the law of 1927 imposed on the cities, impossible to meet in their financial situation at that time, the obligation to provide the most indigent families with adequate housing [1, pp. 59-60]. At the same time, the first housing cooperatives in Poland were created, at the head with Warsaw Housing Cooperative (*Warszawska Spóldzielnia Mieszkaniowa*, further "WSM") founded by the end of 1921 [3]. Its pioneering activity, however, did not lead to the development of solutions allowing to improve the accessibility of the smallest, at most two-room apartments, the only ones available for the worst-off strata of the working class. The blocks of flats built by WSM in Warsaw district of Żoliborz, mostly because of too extensive usable area, have proven not to be commensurate to the financial capacity of lower working class. It ultimately led to dominate the newly built estate by intelligentsia and so-called *proletarian aristocracy* and brought worse positioned workers to move to located peripherally within the downtown, but much cheaper, estate in the district of Rakowiec [3, pp. 39-50], [4, p. 4].



Fig. 1. Bruno Zborowski, Block of flats of the 2nd housing estate built by WSM in Zoliborz, Warsaw. Source: National Library of Poland (Biblioteka Narodowa), p. F.63458/II, photo by H. Poddebski

3. Society of Workers' Housing Estates (TOR)

3.1. Economic conditions of the project

The situation of housebuilding in Poland was clearly negatively affected by the Great Depression. The collapse of the economy, which in the Polish conditions lasted from 1929 until the mid-1930s [5, pp. 118-153], significantly limited the possibilities of improving the living situation of labourers. However, the later gradual economic growth allowed for another initiative aiming at improving the availability of affordable housing for workers. For this purpose, on 1st February 1934, the Economic Committee of the Council of Ministers (Komitet Ekonomiczny Rady Ministrów) founded the Society of Workers' Housing Estate (Towarzystwo Osiedli Robotniczych, further "TOR"), a state-owned company, which statutory purpose was to build and grant credits for building the workers' houses, which could comply with certain parameters, resulting from the real needs and limitations of their future users [4, p. 1], [6, p. 1]. At the beginning, the activity of TOR has been limited to validating loan applications and, when adopted, to addressing the loan request to the State Development Bank (Bank Gospodarstwa Krajowego, further "BGK") [4, p. 7]. In time, the Society undertook building of estates on its own. The financial stability of TOR was secured by the state shareholders1. In 1934, financing the credits was based on BGK Labour Found deposits. Next year, the resources of State Building Found (Państwowy Fundusz Budowlany) were added [4, p. 7]. Considering the scale and importance of this venture it can be astounding that the TOR-related source literature is not sufficient. The subject is analysed either selectively and concerns the architectural aspect of particular housing estates built with TOR involvement² or put in the context of another process³. However, there is a lack of literature entirely concerning the mode of operation and legacy of the Society which, within five years of its activity in interwar Poland, significantly contributed to housing conditions improvement of considerable number of the poorest labour class families. This fact could be the real reason for this subject to be omitted in the postwar literature. The communist Poland authorities, which monopolized the role of working people's benefactor, were not willing to admit that the pre-war Poland was not only interested in improving the working-class living conditions but also did it effectively.

3.2. General assumptions of the project and its background

This effectiveness, which interwar Poland owed to its own experience in the field of labour housebuilding, was undeniable. The usable area of flats built by the TOR founds⁴ resulted from prior experiences acquired during the construction of above-mentioned WSM housing estate of Żoliborz. The issue of availability of the flats for financial limited workers was a key one. Primarily, target groups for planned estates were defined. In the case of single-family house held for sale they were "non-manual and manual workers, earning up to 250 [polish złoty] per month" and with regard to flats in single- and multi-family buildings put to rent, it was just claimed that the level of rent should not exceed the financial limitations of the future tenants [6, p. 2]. Possibility of constructing the individual buildings has been rejected and, as a general principle, the building of whole housing estates or their parts was approved. It was

BGK, State Labour Found (*Państwowy Fundusz Pracy*), public insurance companies and Directorate General of State Forests (*Dyrekcja Naczelna Lasów Państwowych*) [4, p. 1].

For example [7].

For example [1] or [8].

⁴ It was 36 square meters for multi-family building and 42 for single-family building [6, pp. 2,6].

indicated that, for economic reasons, the housing estates will not be innovative, and their infrastructure may be limited to a necessary minimum. It's been also said that "in the construction of housing estates following the foreign examples [is not indicated, because] the overall prosperity is much higher there" [4, p. 9], [6, p. 4]. In order to reduce the general expenses it was decided that the loans will be only granted to the housing estates located on the state- or municipal-owned grounds. Purchasing a plot was only possible when there were no public grounds in the localization of planned housing estate, but just under condition that the purchase cannot be financed by the Society's loan. The need of an appropriate choice of localization has also been emphasized in order to secure the labour-like character of the estate. For this reason, peripherally located grounds were preferred as they were considered to be much cheaper and, therefore, less attractive for the wealthier groups of society, and as such less affected by potential gentrification than the downtown areas. Much more attention has been paid to the issue of extension and modernization of urban areas, which was particularly relevant at that time. Rejecting the investment in non-urbanized areas, the necessity of building the estates on the basis of existing settlement structure and in accordance with the valid site plans was underlined [4, pp. 9-10], [6, pp. 4-5]. Such actions were regarded as a chance for development of already existing cities and for spatial integration of newly created settlements with them.

3.3. Financial basis of the Society

Well-functioning system of loans has been considered as a basis of sustainability and proper functioning of the Society. Principles specifying the rules of loan granting protected TOR against abusing it by speculators and those who were wealthy enough to get credit without a Society's intermediation. Primarily, in order to secure the profitability of investment and thereby the labour-like character of the estates, the upper limit of loans⁵ has been established. It was also set that constructed flats shall be intendent for people who are "less wealthy and have lower housing expectations" [6, p. 6]. Besides the mentioned usable area restriction, it was also banned to grant the loan for more than one flat per person. Finally, detailed rules were established. Only in respect of constructed buildings their amount could not be higher than 5000 zł multiplied by amount of flats foreseen under the building project. Organizing the surrounding areas could not exceed 20% of the building construction cost. However, when calculating the construction of residential buildings along with the organization of green areas, the amount of the loan could not exceed 80% of all costs. The fixed interest rate for the Society's loans was also determined, firstly at 2%, then reduced to 1.5% [4, pp. 7,8]. The loan repayment period depended on the type of the building⁶. According to the statistics on earnings and rent, TOR also set an upper limit for rent, which could not exceed 20 zł per month in all the housing estates it financed [4, pp. 1-3], [6, p. 7]. Limited with numerous conditions and sealed, the Society's system of granting the loans has proven to be essential for the whole venture. Primarily, low interest rates on loans were very beneficial. Considering that in 1933 the short-term loan interest rate was 6% and in case of the long-term loan 4%, the 2% interest rate offered by the Society had an extremely favourable impact on the revival of the housing construction industry. This enabled the transfer of investment pressure from the small-scale housebuilding for larger-scale one, which also included the workers' housing estates [4, p. 6]. This process seems to be confirmed by the number of housing estates constructed in later years under the TOR assistance system.

It was 5000 zł per flat – depending on the location of the investment, in agreement with BGK, it was possible to set a lower amount of the loan [6, p. 6].

In case of brick construction, it was 50 years and in case of wooden 25 years [6, pp. 6-7].

3.4. Activities of the Society within the Central Industrial District (COP)

The Society began the lending of several new constructions already in 1934, when several investments were granted loans in the total amount of about 3.7 million zł. It was a truly momentous event – for the first time in history, when functioning under the free-market economy conditions, polish social housing achieved such a scale, both in terms of the amount of credited funds⁷ and also in its territorial range, what was particularly significant. TOR covered with its activity the area of each of the three former partitions, what was a major contribution to reduce the economic disparities and also differences between the architectural landscape of the individual parts of the state. It's worth noting that the estates were built not only in larger cities, but also in much smaller industrial settlements or towns8, which had a significant impact on the industry development of outside the large urban areas. In 1934, loans were granted to various types of borrowers. Local governments received 44% of all funds, co-operatives 23% and the Society itself 19%. The smallest loans were granted to the National Road Fund (Państwowy Fundusz Drogowy – 10% of all)9 and to the state-owned factories (4%) [4, p. 11], [10, p. 9], [11, p. 11]. It should be noted that share of TOR itself in loans granted10 increased whilst the share of local governments decreased11. It was caused mostly by deterioration of their financial situation and it should not undermine their role in improving living conditions of the less prosperous rank of labouring class in the first year of the Society's activity. In 1935, the financial resources earmarked for loans increased to about 9.3 million zł. Next year brought a slight decrease (about 8.4 million zł), however, in subsequent years, the total amount of credits granted began to increase again, amounting to 10.2 million zt in 1937 and 12.1 million zt in the record year of 1938 [10, p. 9], [11, pp. 10-13]. Comparing to the first year of it's operation, the Society's expenditure on financing the loans significantly increased by over threefold.

The foundation of Central Industrial District (*Centralny Okreg Przemysłowy*, further "COP") was an important circumstance that highly interacted the increasing involvement of the Society in the construction of workers' housing estates in 1936 [13, pp. 37-117]. As so far, TOR investments on the areas later included in COP has been focused in two cities and two smaller industrial towns¹² and were worth about 0.93 million zł [4, pp. 11,12]. The increase resulted from a number of factors. One of the most important was certainly the stabilization of Polish economy in the second half of the 1930s. Within two years from the formation of the District, the number and value of credits granted for investments implemented within its area increased almost eight times in relation to the expenditures from years 1934-1935 and finally amounted to about 7 million zł [10, p. 9], [11, pp. 10-11]. Another incentive was the growing threat to the state's external security. The arms industry, located mainly within the COP area,

In 1934 the average wage of worker employed in the large and medium-scale processing industry was around 105 zł per month [9, p. 183].

Only in 1935 the Society's loans were granted to several investments throughout the country (Warsaw, Katowice, Chorzów, Poznań, Gdynia, Toruń, Grudziądz, Sochaczew, Hajnówka, Janowa Dolina (today Bazaltove in Ukraine), Zagnańsk, Starachowice, Częstochowa, Mościce, Dąbrowa Górnicza, Lublin, Lwów – today Lviv in Ukraine – and Łódź) [4, p. 11].

Its activity was mainly related to the construction of the estate located nearby the State Basalt Quarries (Państwowy Kamieniołom Bazaltu) in Janowa Dolina.

Up to 40% of the total value of the credits granted in 1935 and 49% in 1936.

The share of local governments in loans in 1935 decreased to 20%, and lightly increased in 1936 by reaching 24%. [12, p. 22].

¹² It was Lublin, Radom, Mościce and Skarżysko.

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was very important for the growth of Poland's defence potential [14]. It is not coincidence that the biggest loan granted¹³ was earmarked for the workers' housing estate located near the planned Southern Works (*Zakłady Południowe*) in Nisko which was planned to specialize in the production of artillery weapons [11, p. 11]. Two housing estates built under the Society's assistance system within the District could certainly be considered as representative. They were located in its two important industrial centres, Radom and Rzeszów, where the big, state-owned arms industry enterprises were located¹⁴ [13, pp. 118-153], [15]. The rapid development of those two cities, greatly stimulated by their incorporation to COP, drew the Society's attention to their growing demand of cheap, labour house-building.

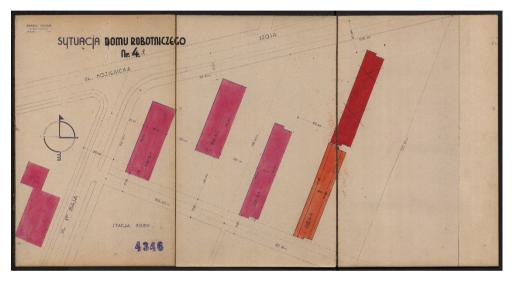


Fig. 2. Józefa Mehl, Site plan of the TOR housing estate in Radom. Source: State Archive in Radom (Archiwum Państwowe w Radomiu), Municipal Records – Technical Documentation (Akta miasta Radomia – Dokumentacja Techniczna, further «AmR–DT»), p. 4031

The estate in Radom is a good example of the realisation carried out by the local government. Before the First World War the town was a part of Russia-dependent Kingdom of Poland. In 19th century, Radom became one of its leading industrial centres and as such, like the whole Kingdom, was severely affected by the closure of the Russian market during the Great War. Therefore, in the case of this economically and administratively degraded town the COP investments created the opportunity to economic growth and were consistent with current state policy of placing the state-owned industrial enterprises within its area [16, pp. 125-131, 219-226]–[18]. In relation to the industrial character of the town, working class living conditions remained a very current issue, especially when the city was ruled by socialist parties for almost the entire interwar period [19, pp. 53-65]. Construction of the TOR housing estate in Radom begin in 1936 [8, p. 322], [20, p. 187]. According to the Society's recommendations regarding location, the block of flats has been situated on cheaper grounds, outside the strict downtown, at one of roads out of the city. The choice of

¹³ It was about 1.75 million zł.

It was State Arms Factory (Państwowa Fabryka Broni) in Radom and State Aviation Works (Państwowe Zakłady Lotnicze) in Rzeszów.

this location seems justified, considering the fact that after the Second World War, the former TOR housing estate was considerably expanded and in its immediate vicinity a new, much larger workers' housing estate was built in the 1950s [21, pp. 36-45]. Until the beginning of German occupation four four-storey blocks of flats were built, including one rough. A range of solutions testifies the innovation of this estate. For example, by planning the position of blocks in intermediate directions¹⁵ an access to day light has been provided. The safety of pedestrian was ensured by locating blocks with access roads and green areas perpendicularly to the main streets. Flats usable area in the first three buildings were compliant with the TOR requirements¹⁶. Blocks were also connected to waterworks, sewerage and electricity [8, p. 324]. The architectural design of the Society's blocks in Radom is also an example of applying the innovative solutions of modernist architecture to the TOR's workers' house-building what completely denied the initial postulate of the Society, which, concerned about a significant increase in costs, originally intended to build on the basis of traditional solutions. As a result, people representing the most indigent rank of working class not only gained access to the basic facilities, but also were granted a previously completely unattainable possibility of living in aesthetic and modern surroundings

In Rzeszów the borrower was the State Aviation Works. In this case, construction of the housing estate under TOR assistance was a part of developing completely new industrial centre. This town is a significant example of the COP's influence on the development of the economically disadvantaged, eastern territories of interwar Poland. The inclusion of Rzeszów in the COP program resulted in its rapid development [22, pp. 204-206, 214]¹⁷. Construction of the TOR housing estate may be certainly recognized as the manifestation of the city's development. The original plan was to build seventeen, three-storey blocks located in the suburban area. Until 1939, only four blocks for workers with flats meeting the Society's spatial requirements were built. Similarly like in Radom, blocks were situated in intermediate directions. The pedestrian's safety was assured through separation of the local traffic from citywide by situating the blocks perpendicularly to the main streets. Buildings were connected to the electricity and the flats had kitchens and toilets with access to running water and sewage. Cellars were designed as a bomb shelters while in the attic the laundry and drying room were located [8, pp. 298-300], [22, pp. 214-216]. Both in Rzeszów and Radom the estates were designed by using the latest achievements of modernist architecture and urban planning. Although the architecture of TOR blocks in Rzeszów was simpler than those in Radom, it is a fact that in those both cases the aesthetic value of the surroundings has been recognized as significant and influencing the quality of life of the estates' residents as positively as other facilities.

South-west – north-east axis.

In the last block of flats, finished by Germans during the occupation period, the original layout has been changed by combining smaller flats into larger ones.

It is worth mentioning, that development of Rzeszów in the interwar period was so intensive, that after the Second World War, when Lwów with its surroundings was incorporated into the Soviet Union, it was Rzeszów that as the biggest industrial town in the area was chosen as a seat of authorities of new voivodship, created mostly from the remaining part of the pre-war Lwów voivodship.

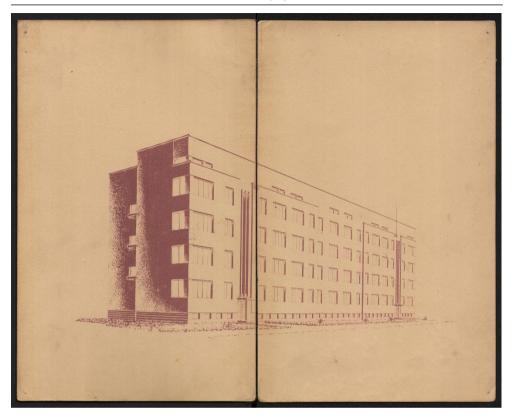


Fig. 3. Józefa Mehl, Axonometry of the 3rd block of flats of the TOR housing estate in Radom. Source: State Archive in Radom (Archivum Państwowe w Radomiu), AmR–DT, p. 3105

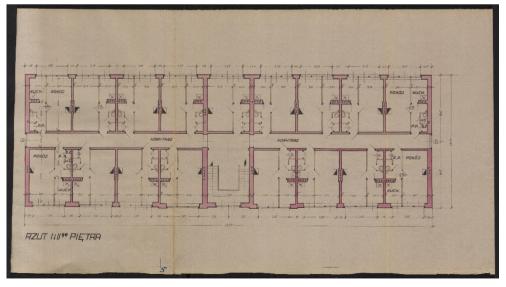


Fig. 4. Upper floors projection of the 1st block of flats of the TOR housing estate in Radom. Source: State Archive in Radom (Archivem Państwowe w Radomiu), AmR-DT, p. 4037

4. Summary

The activity of the Workers 'Housing Estate Society was certainly one of the most significant achievements of interwar Poland in the field of workers' social housing, and for this reason it requires further and more detailed research. Having overcome the initial difficulties and drawing conclusions from earlier cooperative projects, a well-functioning state system of crediting the construction of housing with specific parameters, desired above all by the most needy layers of the working class, was created. The numbers themselves show the scale of the Society's success. For five years of its existence, TOR acquired for construction of workers' housing estates a remarkable sum of over 43 million zł [10, p. 9], [11, p. 11] which was spent on the construction of over 18 thousand workers' flats between 1934-1938 [9, p. 65]¹⁸. The issue of architectural and urban innovation and aesthetics of estates financed by TOR loans also remains important. Contrary to the Society's initial assumptions, many of its later investments represented the highest rank, both in terms of urban and architectural solutions. Through the Society's activities, at least some of workers and their families, previously affected by the housing exclusion, gained the opportunity to live in a place which was not only equipped with all necessary facilities, but also aesthetic. The current achievements of the Society allow us to assume that if it were not for the war, the improvement of housing conditions of the worst-situated part of labouring class would be much greater. It may be concluded that, partly through the TOR's activity, the vision of Szczesny Rutkowski, one of the then publicists and art critics has been fulfilled even to some extent. In 1932 he wrote with an almost prophetic sense: "Let's give Polish architects the opportunity to work [and] within a few years [...] they will create comfortable and beautiful flats, houses, estates and will enchantingly organize our Time and Space" [23, p. 133]. The Society's legacy may certainly be an example of turning this faith into reality.

References

- [1] Korzeniowski W., "Mieszkanie społeczne najpotrzebniejsze. Wczoraj i dzisiaj", *Problemy Rozwoju Miast*, vol. 6, no. 1–2, (2009), pp. 58-73.
- [2] Tołwiński T., *Urbanistyka*, vol. 2: Budowa miasta współczesnego. Warszawa: Zakład Urbanistyki Politechniki Warszawskiej, 1939.
- [3] Mazur E., *Warszawska Spółdzielnia Mieszkaniowa 1921-1939. Materialne warunki bytu robotników i inteligencji.* Warszawa: Instytut Archeologii i Etnologii Polskiej Akademii Nauk, 1993.
- [4] Strzelecki J., Organizacja i działalność Towarzystwa Osiedli Robotniczych. Warszawa: s. n., 1935.
- [5] Kaliński J. and Noniewicz C., Historia gospodarcza Polski XIX i XX wieku. Białystok: Wydawnictwo Uniwersytetu w Białymstoku, 2015.
- [6] Organizacja i wytyczne działalności Towarzystwa Osiedli Robotniczych, s. n., 1934.
- [7] Matysiak-Rakoczy K., "Zespół mieszkaniowy Towarzystwa Osiedli Robotniczych na warszawskim Grochowie (Residental complex of TOR Housing Estate in Warsaw district of Grochów)", *Kwartalnik Architektury i Urbanistyki. Teoria i historia*, vol. 59, no. 3, (2014), pp. 33–61.
- [8] Furtak M., COP Centralny Okręg Przemysłowy 1936-1939 architektura i urbanistyka. Kraj, region, miasto, fabryka, osiedle, budynek. Łódź – Kraków: Księży Młyn Dom Wydawniczy – Politechnika Krakowska, 2014.

Due to the outbreak of World War II, a yearbook with data on the year 1939 was not released. In 1941 Polish government-in-exile has published a Concise Statistical Yearbook of Poland but it did not contain any new data on housing after 1938.

- [9] Mały Rocznik Statystyczny, vol. 10. Warszawa: Główny Urząd Statystyczny Rzeczypospolitej Polskiej, 1939.
- [10] Sprawozdanie z działalności Towarzystwa Osiedli Robotniczych Spółki z Ograniczoną Odpowiedzialnością za 1937 rok, Warszawa: Towarzystwo Osiedli Robotniczych, 1937.
- [11] Sprawozdanie z działalności Towarzystwa Osiedli Robotniczych Spółki z Ograniczoną Odpowiedzialnością za 1938 rok, Warszawa: Towarzystwo Osiedli Robotniczych, 1938.
- [12] Michałowski J., "Trzy lata pracy Towarzystwa Osiedli Robotniczych", in Budownictwo mieszkaniowe Towarzystwa Osiedli Robotniczych, Warszawa: s. n., 1937.
- [13] Drozdowski M., Historia Centralnego Okręgu Przemysłowego. Geneza, budowa, wizja przyszłości, opinie. Radom: Instytut Technologii Eksploatacji Państwowy Instytut Badawczy, 2015.
- [14] Dziemianko Z., Przemysł zbrojeniowy w Centralnym Okręgu Przemysłowym. Łysomice-Toruń: Europejskie Centrum Edukacyjne – Wydawnictwo Adam Marszałek, 2004.
- [15] Radocki H., Centralny Okręg Przemysłowy w Polsce. Warszawa: Myśl Polska, 1939.
- [16] ed. Witkowski S., Radom. Dzieje miasta w XIX i XX wieku. Warszawa: Państwowe Wydawnictwo Naukowe, 1985.
- [17] Gawlik M., "Przemysł Radomia w latach 1815-1914", in *Przemysł Radomia*, Lublin: Wydawnictwo Lubelskie Radomskie Towarzystwo Naukowe, 1970, pp. 107-140.
- [18] Półrola D., "Dzieje przemysłu radomskiego w latach 1918-1945", in *Przemysł Radomia*, Lublin: Wydawnictwo Lubelskie Radomskie Towarzystwo Naukowe, 1970, pp. 141-158.
- [19] Kupisz D. and Piątkowski S., Od rajców do radnych. Samorząd Radomia na przestrzeni wieków. Radom: Archiwum Państwowe w Radomiu – "Łaźnia" – Radomski Klub Środowisk Twórczych i Galeria – Rada Miejska w Radomiu, 2016.
- [20] ed. Kalinowski W., Urbanistyka i architektura Radomia. Lublin: Wydawnictwo Lubelskie Radomskie Towarzystwo Naukowe, 1979.
- [21] Maj E., *Radom w półwieczu 1960-2010. Rozwój przestrzenny*. Radom: Radomskie Towarzystwo Naukowe Instytut Technologii Eksploatacji Państwowy Instytut Badawczy, 2012.
- [22] Rybka A., Centralny Okręg Przemysłowy a polska awangardowa urbanistyka międzywojenna. Rzeszów: Oficyna Wydawnicza Politechniki Rzeszowskiej, 1995.
- [23] Rutkowski S., Osiedla ludzkie. Warszawa-Kraków: Towarzystwo Wydawnicze, 1932.